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Spitfire Series

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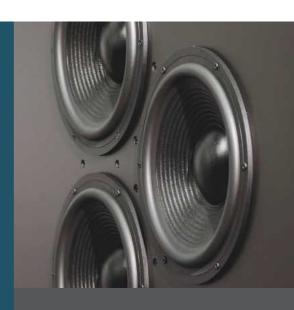


"The soundstage is both wide and deep, able to involve you unhesitatingly in the onscreen action"

"Artcoustic's Spitfire loudspeakers deliver reference volume level home cinema heroics, without ever sounding like it's out of control"

Home Cinema Choice







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WEBSTRACT	SOUTH EAST	WEBSTRACT.CO.UK

 * Please confirm with the dealer in your area regarding Dolby Atmos, not all are upgraded yet.

DOLBY ATMOS

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WELCOME

Happy birthday to us! This issue is our 250th, so we're celebrating with two special features looking back at the technology (p19) and movies (p26) that have shaped the world of home cinema since our earliest



days. Putting these together has been an absolute blast – we hope you enjoy reading them too!

We're not just looking to the past, however. Our grouptest features a trio of the most forward-thinking Ultra **HD TVs currently available**. In a three-way fight between LG, Samsung and Sony who will come out on top? Turn to p59 to find out. And we're also highlighting the absolute state-of-theart in cinema room design in our roundup of this year's CEDIA Award winners (p32). These are remarkable projects that are guaranteed to make you drool. So enjoy the show, and here's to the next 250 issues of Home Cinema Choice...

Mark Craven



MENU









CONTRIBUTORS



John Archer: The UK's most experienced TV tester cut his teeth as an early HCC staffer



Richard Stevenson: Industry veteran and former Editor of UK CE trade journal ERT



Steve May: HCC's former Editor-in-Chief is one of the UK's most respected AV journos



Martin Pipe: Technical expert Martin is renown throughout the home cinema industry



Adam Rayner: The UK's foremost expert in extreme audio writes about bass, hi-fi and, er, cartoons



Adrian Justins: Made his name as the editor of What Video & TV and What Home Cinema

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COVER STORY

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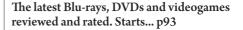
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BULLETIN

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LightStream grows



ViewSonic has bolstered its LightStream lineup with the launch of

two new PJD7-HD Series projectors. While the £620 PJD7835HD has been designed with larger commercial venues in mind, the £580 PJD7830HDL (pictured) is a home cinema model with a throw ratio of 1.1-1.5 and a claimed brightness of 3,200 lumens. Arriving in August, both projectors feature SuperColor six-segment colour wheel tech, horizontal and vertical keystone correction and promise 10,000 hours of lamp life.

www.viewsoniceurope.com

Premium AV receivers | Platinum cables



Another issue, another brace of Dolby Atmoscompatible AVRs

from Onkyo. This month's newcomers are the 7.2-channel TX-RZ800 (£1,050) and TX-RZ900 (£1,350), a pair of new-look THX Select2 Plus-certified amps rated at 185W and 200W per channel respectively. In addition to Dolby Atmos functionality out of the box, the two models are also DTS:X-ready, with Onkyo promising a future firmware update if the relevant software isn't available in time to be included before they hit the shelves. www.uk.onkyo.com



British audio cable manufacturer Studio Connections has introduced a new series of high performance

interconnects that it claims are the best music cables it has ever produced. The new Platinum models have been designed for 'people who take their music seriously' and have already been used in the mastering of the new Leftfield album. Alternative Light Source. Unsurprisingly. they don't come cheap, with a 1m pair of single-ended Platinum Series analogue interconnects costing £2,000... www.studioconnections.co.uk

PLAYLIST...

Team *HCC* spins up its disc picks of the month

Kingsman: The Secret Service (Region B BD)

A combination of flawless Full HD visuals and dynamic DTS-HD MA 7.1 sonics ensures that Matthew Vaughn's violent spy pastiche carries a licence to thrill on Blu-ray

Fortitude: Season One All-region BD



This chilly murder mystery will has kept us glued to the screen with its compelling storytelling and stunning hi-def imagery.

The Witcher III: Wild



Recent software patches (including one that makes the tiny onscreen text more readable) have made this sensational game even better.

Force Maieure



An avalanche turns a seemingly perfect marriage upside down in this sharply observed black comedy.

House of Cards: Season 3



More political thrills and spills as Frank Underwood's first term as the US President comes under attack.

UHD Blu-ray launch on track

BDA boss describes final HDR spec as 'a reasonable compromise'

The 4K Ultra HD Blu-ray format is on course for its mooted pre-Christmas release says Ron Martin, BDA board member and VP of Innovation at Panasonic Hollywood Labs. Speaking to HCC, Martin described the final specification and Blu-ray's long-awaited HDR (High Dynamic Range) solution as 'a reasonable compromise with content providers and technology companies.'

The upcoming UHD Blu-ray system will use a sub-set of the SMPTE 2084 10-bit HDR standard. It comes with mastering guidance so that content providers and display makers can provide a uniform presentation. UHD HDR Blu-ray discs will boast a 400 Nit average and anywhere from a 700-1,000 Nit total peak value. 'This gives a very compelling presentation without some of the more wild targets that were being discussed,' insists Martin. 'The main thing about HDR that somehow gets left out of the equation is that it's not about brightness – it's about better contrast and colour volume in the highlights.'

The HDR provision on UHD Blu-ray, Martin confides, is actually a 10-bit 10,000 Nit container,





Ron Martin: 'Studios believe that HDR Ultra HD Blu-ray will be a big push for people to re-engage with content'

'but we will self-police to a 1,000 Nit level. Studios can master higher HDR levels, but the feedback we're getting from cinematographers

is that they want the limit. They're more interested in better contrast and colour than peak brightness.'

Studio support

Martin admits there are still some practicalities to resolve though. Studios have the option of releasing UHD movies in both SDR (Standard Dynamic Range) and HDR versions. 'Whether it makes sense to actually do that is too early to tell. It's down to the creators approving the conversion process,' he says. 'If an HDR disc in a UHD Blu-ray player is going to be played on an SDR TV it will probably come up with a card from the studio that says something like: "We prefer you put the director-approved SDR disc in a player and play that." If you don't, the player will downconvert it to a non-HDR signal.'

According to Martin, the widespread appeal of HDR has helped fuel studio support for the new format. 'A year ago at IFA I was pretty concerned (about content support), but now BDA member studios are much more proactive in their talk and planning - because of HDR.' Martin points out that Warner, Universal, Fox, Paramount and Sony are already preparing Ultra HD Blu-ray content.

'Studios believe that this will be a big push for people to re-engage with content. Just 4K alone doesn't really cut it, but doing an HDR version of an existing film is very achievable and for new FX-laden titles like Transformers it's a compelling feature. The studios are starting to see the advantage in bundling HDR and 4K resolution together.'

Loading...

Team *HCC*'s pick of the hottest BD and DVD news

From A to Z(ardoz)



Arrow has lifted the lid on its September line-up of Blu-ray releases. As well as a non-limited version

of Society, the Arrow Video range will be bolstered by John Boorman's sci-fi cult classic Zardoz, spaghetti western Requiescant and 1980s slasher The Mutilator. Meanwhile. Arrow's Academy range continues to mine the best in world cinema with Hard to be God, Closely Observed Trains and The Fireman's Ball.

_isten up screwheads!



Cult US label Shout Factory will release what it dubs 'the definitive' Blu-rav edition of Army of

Darkness in October. There's no word yet on what this Region A-locked US disc will include, but hopes are high that it will boast all three cuts of the film.

Dead and loving it



The fifth season of hit TV series The Walking Dead will hit DVD and Blu-ray in the UK on September 28. Extras

on both releases take the form of commentaries, deleted scenes, two Making of... documentaries and nine behind-the-scenes featurettes.

Sony shuns Atmos and DTS:X

Believes multiroom audio is a 'more compelling' feature on AV receivers

Sony has defended its decision to hold back Dolby Atmos and DTS:X support from its latest range of AV receivers, arguing that multiroom audio is a more compelling user experience. But the brand has hinted that immersive 3D sound could debut on upcoming high-end ES models.

Speaking at a product showcase to promote its new range of Google Cast-enabled multiroom audio kit, product specialist Eric Kingdon told HCC that the decision not to equip its latest AVRs with new codecs was a matter of price vs. performance. Instead, both the STR-DN1060 (£500) and STR-DN860 (£400 - reviewed on p48) can function as part of Sony's wireless multiroom audio system.

'The reason Atmos and DTS:X isn't equipped on these AV receivers is because they're targeted at a price-conscious sector,' justifies Kingdon. 'The most important thing about any AVR is the sound quality. So we start from there and then see what features we can add depending on development costs. Our priority is to make AVRs multiroom-capable and equip them with Google Cast, above adding more channels at this point in time.'

Indeed, Sony suggests that integrating the AV receiver into a multiroom setup can help the AV separates category find new buyers. 'One of the things that multiroom has proved is that people want to live with their music in a flexible way. If people can enjoy an AV receiver in that way, it might make them think a lot more about what else an AV receiver can deliver.'

The challenge of adding yet more speakers in the home shouldn't be underestimated either. 'Consider how difficult it is to even get five speakers in a room... it's a tough sell for a lot of people, hence the success of soundbars and bases,' he says. 'Research shows that not everyone who buys a seven-channel amp uses all seven channels. Which



Eric Kingdon: 'Atmos and DTS:X aren't equipped on these AVRs because they're targeted at a price-conscious sector

is why most companies made them bi-ampable or second zone. People want more features for their money, they don't want more speakers.'

Dolby Atmos vs. DTS:X

However, Kingdon did let slip that Sony has been experimenting with Atmos and DTS:X setups in its Tokyo listening room. On the differences between the two, he claims that 'Dolby Atmos is actually more difficult to get right, because it's based upon a fixed set of recommendations, whereas with DTS you can sprinkle a set of speakers in a room and it'll adapt to them. That's very clever.'

Kingdon believes that any Sony receiver with Dolby Atmos and DTS:X would most likely be an ES-grade component. 'If you want to implement a 5.1.4 speaker configuration, you need nine channels and that takes you to ES level straight away,' he teases, with a suspiciously IFA-like glint in his eye.



Yamaha unveils 2015 Aventage AVRs

Expanded lineup features five new models, including affordable UK-tuned model

Yamaha has taken the wraps off five new additions The range-topping RX-A3050 to its Aventage range of AV receivers, with employs ESS Sabre ES9016 and ES9006 DACs the biggest surprise being the inclusion

of a more affordable five-channel model in the lineup. Costing just £550, the RX-A850 sees Yamaha adding a brand-new price point to the Aventage range. Recognising that it is entering a hotly contested sector of the

AV receiver market, Yamaha

has had the RX-A850 tuned

specifically for the UK and kitted it out with HDCP 2.2. Bluetooth, Wi-Fi and hi-res audio playback.

The remainder of the new lineup consists of the £900 RX-A850, £1,000 RX-A1050, £1,500 RX-A2050 and £2,000 RX-A3050 (pictured), which replace their respective 2014 models. All four AVRs feature Dolby Atmos support out of the box, with the RX-A1050 and up also adding support for DTS:X.

Other improvements include a new jitter clock, a refined version of the brand's YPAO automatic system calibration tech, a revamped user interface and an upgraded AV Controller app.

All five models should hit stores in late Summer.

Mr Scott, energize! Who says you can't fly in an armchair: **the Excite 5.1 system.** All there is.



DIARY

Our calendar ensures that vou don't miss out...

→ AUGUST

03: Nightmare City
This classic Italian zombie flick
breaks loose on Blu-ray today, offering up two presentations of the film (including Arrow's brand-new 2K restoration), plus an extensive array of bonus features. www.arrowfilms.co.uk



06: Fantastic Four Can Twentieth Century Fox's reboot of the iconic Marvel superhero comic overcome the negative word-of-

mouth that has surrounded its production and deliver a fantastic slice of blockbuster cinema? Find out as the superhero flick arrives in multiplexes across the UK. www.fox.co.uk

10: Robot Overlords

Ben Kingsley and Gillian Anderson star in this British sci-fi following a plucky group of survivors fighting against alien robots that have conquered the Earth. Seek it out on Blu-ray and DVD. www.signature-entertainment.co.uk

Based on the short film of the same name that took the 'net by storm in 2010, this Adam Sandler sci-fi comedy finds Earth under attack from aliens that are based on characters from classic arcade games such as Donkey Kong and Pac-Man. Does it have what it takes to rack up a high score at the UK box office? www.sonypictures.co.uk

4: The Man from U.N.C.L.E.



The 1960s spy series gets a bigscreen makeover courtesy of director Guy Ritchie. If he can work the same magic on Napoleon Solo and Illya Kuryakin that he did on Sherlock Holmes and Dr. Watson, then *The Man from U.N.C.L.E.* is sure to be a smash at cinemas. www.warnerbros.co.uk

25: Cinderella

Disney's live-action take on the legendary fairy-tale was a success at cinemas. Now it hopes to be the belle of the ball on Blu-ray and DVD. www.disney.co.uk

The next issue of your favourite home cinema magazine hits the stands packed with hardware tests, features, outspoken opinion and in-depth software reviews www.homecinemachoice.com

Movies not quite in the Cannes

HCC returns from the film festival hoping Sky Sharks makes it to Blu-ray

There's far more to the festival than glitz

Like Christmas, the Cannes film festival comes but once a year. Luckily, it's in the late Spring and in the south of France. But while the film industry's annual shindig seems to be a glamorous affair of red carpets and yacht parties, in reality Cannes is a sales market. And it's a market for not only finished films, but films that are just concepts...

The real business is done not in the cinema of the Palais venue, but in its bowels. A place referred to by people in the industry as 'The Bunker', where fresh air

and sunlight are nonexistent. Here. people huddle in booths selling their wares, with no reference to where you are. So, basically, it's just like any trade show on the planet open only to filmmakers, people in the industry... and HCC.

The market is made up of sellers and buyers - film distributors, TV channels and anyone else who needs to fill a schedule. While twenty of the world's best new movies compete at the film festival, the other cinematic hopefuls are bought and sold here if they are lucky. And some may escape onto some sort of VOD platform, the graveyard for films that failed to connect with not only an audience but

also any buyers.

High-concept horrors

All of yesterday's heroes seem to be represented in the bunker. Former *Universal Soldier* Dolph Lundgren. former Aikido instructor Steven Seagal, former king of disco and leading Scientologist John Travolta. All trying to make a living on past glories – the poster for I am Wrath, for instance, appears to have Travolta's head photoshopped on to what appears to be a Terminator's body.

Then there are the high-concept flicks. A few years ago Sharknado made a lot of noise at Cannes. which spawned Ghost Shark and Avalanche Sharks. This year we have Sky Sharks, which ups the game with Nazis riding sharks in an attempt to (once again) take over the world. This crowdfunded film actually got picked up, so you might see it eventually.

Or how about Lavalantula? What's scarier than a tarantula? A giant tarantula. What's scarier than a giant tarantula? A giant tarantula that spews lava. This comedy-horror stars Steve Guttenberg as a washed-up '90s actor (who, strangely, isn't called



Academy alumni Leslie Easterbrook and Michael Winslow. Meanwhile, Bring

Me The Head of The

Machine Gun Woman illustrates the tired nature of international movie sales. This Chilean action comedy ('They came for her head... She cut them to pieces') appears to have been hanging around since 2012, and was released on DVD in the UK in 2013, but yet is still

The wizards of odd

If you look around the Cannes market, the words 'attack' and 'zombies' crop up so

on the sales catalogue.

often that the thought or a zombie attack seems mundane. But add the word 'lederhosen' and you have to stop and look. Attack of The Lederhosen Zombies screams the poster. We guickly walk on, trying not to make eve contact with the sales guy. because he seems desperate and we are possibly the only person to pay any attention to his poster all day.

Elsewhere, someone has remade The Wizard of Oz, with the tag line 'The first faithful adaptation of the literary classic'. From the poster it appears they are walking across the causeway at Holy Island in Northumberland, so maybe we should just stick with the Blu-ray of the Judy Garland version instead.

So, behind all the glitz, glamour and scarlet flooring of Cannes is a real business. Attack of The Lederhosen Zombies and Lavalantula may not be the first or even your hundredth choice to watch, but like the creature in Jeepers Creepers they are out there looking for your eyeballs. No doubt next year some of these titles will still be hanging around, but the ones which do flee 'The Bunker', such as Sky Sharks, could actually be worth a watch... @JohnnyFocal

This month's top 10 news stories in handy, bite-sized chunks...



Teufel brings the thunder...
German loudspeaker manufacturer Teufel is taking its upcoming 115dB Rockster Bluetooth speaker on the road in Europe this Summer with the aid of a new 'Thundertruck'. Described as 'a festival on wheels', this Mad Max-esque behemoth is actually a modified 1977 MAN 474 German military truck that comes equipped with a 13m² dance floor,

a bar with two fridges, four smoke machines, a lighting system, eight Rockster speakers and two additional subwoofers. Visit www. teufelaudio.co.uk for more info about this madness.

Atmos added to ...Thrones

HBO has announced that it will release

Special Edition Blu-ray

steelbooks of the first four

seasons of *Game of Thrones* with Dolby Atmos audio later this year. Seasons One and Two hit the US on November 3, with Three and Four following soon after. As yet, there's no word on a UK release of the new Blu-rays.

Fantasy finale sets new record
Sticking with Game of Thrones, the final
episode of the recently concluded fifth
season proved to be a ratings record-breaker
for Sky. The UK broadcaster claims that some 3.1m
viewers watched the programme live on June 15
(including both the 2am simulcast and subsequent
9pm broadcast), making it Sky's most-watched
entertainment programme to date.

DVD/BD whips up a storm
Kinky bonk-buster Fifty Shades of Grey has spanked the opposition on Blu-ray and DVD, shifting more than 379,000 units on its first three days on sale, making it one of the year's top sellers to date behind The Hobbit: The Battle of the Five Armies and Paddington.

The decade's biggest hit
With sales of over 4m units, Disney's Frozen
has topped The Official Charts Company's
poll of the UK's biggest home entertainment
hits of the past decade. Avatar and Skyfall finished in
second and third respectively.

Amazon debuts HDR 4K
Over in the US, Amazon has become the first streaming service to offer users High Dynamic Range 4K content. At the time of writing only the first season of *Mozart in the Jungle* is available to Prime members in 4K HDR and only Samsung's SUHD TVs are capable of decoding the metadata. There's no word on when HDR 4K material will be added to the UK platform.

Soundbars aid market growth
The latest figures from industry analyst
Futuresource Consulting claims that the
market for home audio grew by 22 per cent
in 2014, delivering just under \$10bn worth of revenue
worldwide. Futuresource puts the growth down
primarily to wireless speaker and soundbar
shipments 'exceeding expectations' and 'far
outweighing the decline in AVRs and hi-fi systems.'

Dynamic compatibility
Technicolor has announced a High
Dynamic Range (HDR)
single-layer solution that is backwards-compatible with
Standard Dynamic Range
(SDR) TVs. 'It allows for the storage and delivery of one video file, which plays back on legacy SDR TVs and new HDR TVs coming to market,'

claimed the company in its launch announcement.

B&O feels even more Love
Following high customer demand, Bang &
Olufsen has added a limited edition version
of its BeoLab 19 wireless speaker to its 90th
anniversary Love Affair Collection. This special rose
gold incarnation of the distinctive dodecahedronshaped speaker can be yours for £2,400.

They do give a damn!
The 1939 epic Gone with the Wind found itself unexpectedly topping Amazon's Blu-ray sales chart in the US for a short period of time last month. The sudden surge in sales was spurred on by bogus rumours that the film was going to be pulled from shelves due to its prominent use of the Confederate flag following the murder of nine black churchgoers in Charleston, South Carolina.



PREMIERE

What's happening in the world of TV and films...

Spidey webs new star

19-year-old English actor Tom Holland has landed the hotlycontested role of Peter Parker/ Spider-Man in the Marvel Cinematic Universe. The new Spider-Man is expected to debut in next year's Captain America: Civil War before getting his own solo film in 2017.

Killer TV show killed off



US network NBC has decided not to proceed with a fourth season of its acclaimed crime series *Hannibal*. All is not lost, however, as executive producers Bryan Fuller and Martha De Laurentis are trying to find the show a new home.

Rock goes on Rampage

Dwayne 'The Rock' Johnson is clearly Hollywood's go-to-guy when it comes to epic property damage. Fresh from the success of earthquake flick San Andreas, he's now attached to a film adaptation of the '80s arcade game Rampage, in which a trio of giant monsters punch a city to pieces.

We Asked... What brand is your main television? LG Panasonic Philips Samsung Sony Other 12% 24% 12% 24% Results from www.homecinemachoice.com Go online for more polling action





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20 YEARS OF HINEMA

Team HCC reveals the technologies, products and formats that have changed the experiences of AV-holics since our first issue in 1995

HOME ENTERTAINMENT TECHNOLOGY never stands still. The hardware you use in your system today is likely to be much different to what it was five years ago, let alone 15 or 20.

YAMAHA DSP-Z11

While some changes have immediate impact (the arrival of Blu-ray brought performance improvements to AV setups as soon as you plugged the player in) others take longer to reveal their true

colours. OLED displays, for example, are only now beginning to prove their real worth despite years of existence. Meanwhile, Wi-Fi has grown from niche to ubiquitous.

AC IN

These are just three of the twenty innovations we've ranked as key in the last two decades. But what are the others, and which claims number one spot? Turn the page to find out...

FRONT A







19. HDMI ARC

Since it launched in 2003, the HDMI connection has earned something of a bad reputation from professionals and consumers alike (we've heard its acronym retooled as Highly Dodgy Multimedia Interface), not helped by its continual specification alterations. However, HDMI has mostly proved up to the task of catering for our digital audio, video and data needs, and with the arrival of the Audio Return Channel (ARC) under the v1.4 specification in 2009 it pulled the proverbial rabbit out of the hat. Here, cleverly, was a cable connection that worked two ways, passing info onto your display while also sucking down audio information. Naturally, it's found a home in soundbars and AV receivers, and streamlined all our lives. One cable to rule them all? Indeed.

18. Freeview

In 2002, getting by on a limited diet of analogue TV channels had ceased to be fun - if it ever was. Staunch free-to-air AV-holics were casting envious glances at their Pay-TV brethren, who were gorging themselves silly on sports and movies while they searched in vain for something interesting to watch on Channel 5. The launch of Freeview in October of that year changed it all. By switching the UK's FTA platform to digital transmission, the lineup was at last able to grow – the likes of ITV2, Sky Sports News, UK History, BBC Three and Four provided channel hoppers with, at last, something approaching a varied choice, and Ceefax was booted in favour of the slicker BBCi (latterly BBC Red Button service). Thirteen years later, Freeview is going strong, with DTT signals used by more than 19 million UK homes.





17. WI-FI

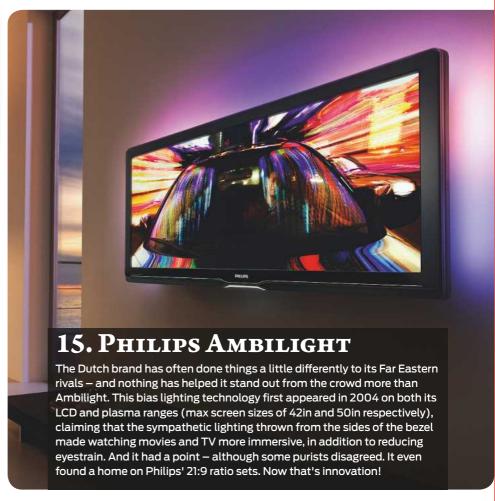
Connecting your AV hardware to a home network is, these days, almost a must. Only the most stoic movie fan can make do without video-on-demand streams, app control of gear and playback of music, film and image media from connected players and storage. And while in the pro-install world a wired hookup is still de rigueur due to its better stability, wireless is the way to go for most of us. So when did Wi-Fi hit our cinema rooms? That's debatable. The original IEEE 802.11 protocol broke cover in 1997, but the tech existed before then. More to the point, Western Digital only added Wi-Fi connectivity to its media player line in 2011, and the first AV receiver to offer an integrated wireless 'net connection was Sony's STR-DN1030, only three years ago. So it just seems like it's been around for yonks.



16. Room EQ

Installing a multichannel speaker setup with an AV receiver or amp/processor combi can seem daunting to home cinema beginners, so the introduction of speaker calibration systems by many brands has proved very welcome. We all know the drill by now – connect the supplied setup microphone, place it at your listening position and let Audyssey's MultEQ, Yamaha's YPAO, Pioneer's MCACC or whatever system you have measure your room and speakers and fine-tune the sound accordingly. And if you've got a speaker wired out-of-phase, It will let you know.

But what if the finished performance doesn't suit your tastes? If the dialogue channel sounds flabby or your rear surrounds have lost bite? Then you can still get down and dirty and experiment yourself. Automated EQ has encouraged us all to pay more attention to the science of sound – and that's no bad thing.

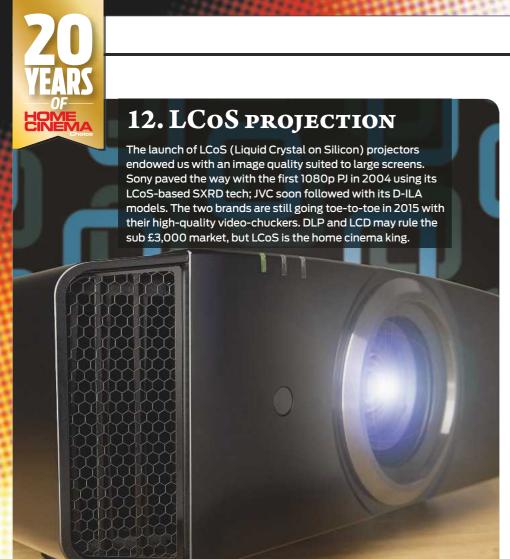






13. KEF's 'EGGS'

Sometimes AV and style appear to be distant relations, particularly where loudspeakers are concerned, and particularly back in the late 1990s when right angles reigned supreme. Enter KEF's KHT-2005 package, which upon release in 2000 injected a much-needed sense of flair into the multichannel speaker market, courtesy of the eye-catching egg-shaped cabinets. It helped, of course, that KEF's sub/sat array was no bargain-bin package either. The HTS-2001 satellite was at the time the brand's smallest ever speaker to employ its point-source UniQ driver technology (still a feature on KEF models all the way up its new flagship Blade Two) and served up a convincingly coherent and detailed soundfield with a hefty dollop of scale. The sub/sat market hasn't been the same since.





11. Soundbars

In 2015, soundbars of all flavour are everywhere (and we still don't appear to have reached the limit of the market), but 13 years ago the concept launched, and it was a bit different. Pioneer's PDSP-1, dubbed a Digital Sound Projector, packed 254(!) micro drivers into its vertical-standing body, plus some clever DSP, to create a virtual surround sound effect from a single enclosure. It cost around £25,000 - and never really came to market but the ball was rolling. Yamaha would be the next brand to pick it up, unleashing its YSP-1 sound projector in 2005, albeit with fewer drivers and fewer noughts on the price tag. Since then, the soundbar market has diversified to include everything from budget stereo models to premium, audiophile combis employing separate subwoofers. And we even have soundbases too. They all seek to offer quality sonics without clutter, so it's easy to see why they've taken hold.



These days we're used to the idea of a hemispherical soundfield thanks to the Dolby Atmos and Auro3D formats, but audio marque Yamaha has a good claim to being an early forerunner to these next-gen experiences — it was including presence channel outputs and the associated DSP in its home theatre receivers back when Atmos was unheard of. And no model was more revolutionary than 2008's DSP-Z11 flagship. This 11-channel behemoth allowed for a 7.1 system to be run with two front height speakers and two rear height speakers, creating (as we said in our review back then) 'a three-dimensional space that far transcends actual room boundaries.' And you could get it in a gold finish, too.



09. NETFLIX

The undoubted success story of the video-ondemand generation, streaming giant Netflix - we're repeatedly told - has 'changed the way we watch TV'. While this is certainly true for many when it comes to series programming (not so much with movies, let's be honest – the catalogue is somewhat limited). it's Netflix's innovative nature that appeals the most to us. The company that started life as a DVD-rental-by-post operation introduced its streaming only subscription in 2010, and has since led the industry in terms of hi-def and 5.1 audio provision, proving that video-on-demand doesn't have to be an AV quality dead zone. Furthermore, Netflix became the first avenue for 4K TV owners. in the UK to stream native UHD content and is soon to add HDR (High Dynamic Range) to its tech roster.



08. BLU-RAY

Where would we be without Blu-ray? Watching HD DVD probably...

Okay, format wars aside, Blu-ray has been the focal point of our hobby for almost a decade, introducing a step-up in image quality over previous formats that's so obvious you'd need to have your eyes shut to not notice. Yes, we all can reel off some of the format's foibles (from region-coding and slow loading times to missing titles and profile upgrades) but you can't argue with its visual charms. And the rapid price erosion of BD hardware since those first-gen players of 2006 means anyone can afford to own a deck.

07. ALL-IN-ONE SYSTEMS

How do you introduce someone to the wonderful world of home cinema? Give them everything they need (expect the display, admittedly) in one box and slap an enticing price tag on it. This is the brilliance of all-in-one home cinema systems, combining a player, amplifier and speaker setup into a smallscale package. During the DVD boom around the turn of the century, such systems were everywhere and flying off shelves, acting as that first rung on the ladder to AV nirvana. Blu-ray-based packages still provide the same function in 2015, but soundbars have certainly stolen their thunder.



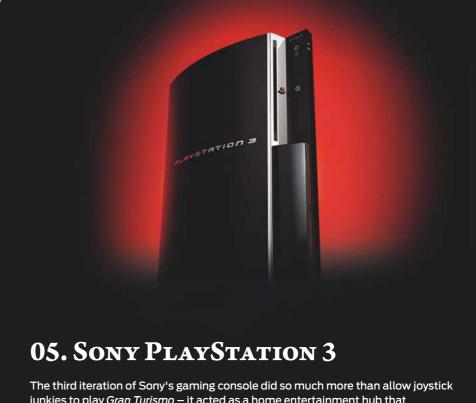


06. ULTRA HD

The new boy on the format block, Ultra HD (or 4K if you want) is yet to mature into a game changer, but it surely will. By the beginning of next year there will be VOD, disc and IPTV options available to UHD screen owners, relegating 1080p to the AV attic. This tech isn't new, though – studios have been mastering films at 4K resolution for years. It's the opportunity to experience pixel-perfect iterations of movie classics that has us champing at the bit. And standing in UHD's favour is the hardware support – compatible TVs now range in size from 40in to 85in. If you don't own one, you soon will.

HCC #1

Nokia's Pro-Logic TV; the making of *The Mask*, speaker systems from DALI, B&W, NHT and Rock Solid; news that *Star Wars* on VHS was being discontinued... Just some highlights from our first issue.



The third iteration of Sony's gaming console did so much more than allow joystick junkies to play *Gran Turismo* — it acted as a home entertainment hub that appealed to forward-thinking AV hedz and proved remarkably adept at rising to new challenges during its eight-year lifespan. As an example, the PS3 was the first Blu-ray player that *HCC* ever tested, bringing HD disc playback to our home cinemas before any other brand. And a few years later, when consumers were told they would have to upgrade their BD deck to support 3D formats, all the PS3 required was a firmware update. Add in its other features — SACD support, disc ripping, DLNA networking — and the console looks like even more of a genuine technological powerhouse.



4. SKY+HD

Yes, we know that TiVo was the originator of the hard drive-based PVR, but satcaster Sky brought the concept to the masses with its debut Sky+ set-top box in 2002. First-gen models packed a whopping 40GB HDD allowing you to archive no more than around 10 movies – capacity these days is 2TB.

There's more than one-touch recording to celebrate here, however. Back in 2006, hi-def transmission was added to the Sky feature roster. Movies! Sports! Unparalleled picture quality! It was enough to make you ascend a ladder and see where a dish could be installed on your house. This, indeed, is where Sky earns it spot in our pantheon of innovation – its Sky+HD platform has never been anything less than forward-thinking, be it with 3D, pay-per-view, catch-up TV or Sky Go.

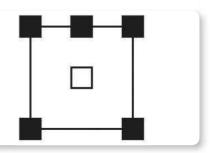
3. Plasma TV

Gone but not forgotten – plasma TVs were on the wishlist of all AV fans from their 1997 UK debut with Fujitsu's PDS4201E-H right up to their retirement last year. Initially not necessarily because they offered the biggest screen size (rear-projection sets were hitting 50in+ when 42in was the biggest PDP size), but because they catered for wall-mounting.

Screen sizes eventually grew to monstrous (150in, anyone?) and picture quality improved dramatically from the first-gen screens, with plasma's strengths versus LCD (greater contrast ratio, better viewing angle, retained motion resolution and lack of backlight irregularities) being realised. Screen burn? Merely an occupational hazard.

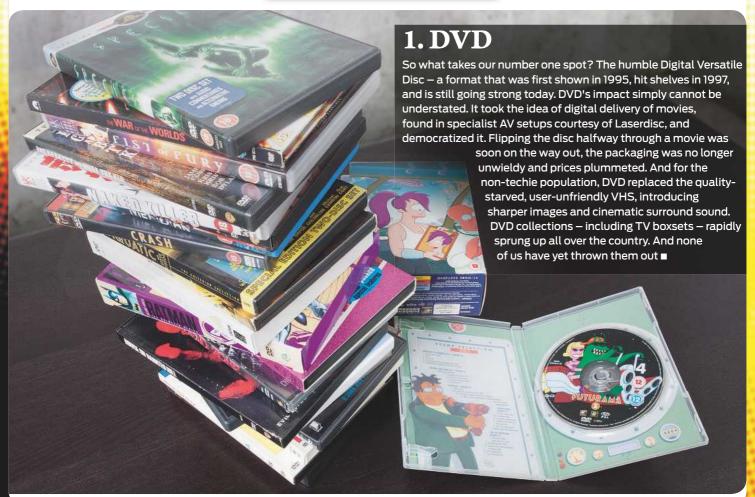
And then came Pioneer's Kuro – a majestic TV range so in tune with the demands of film fans that many argue it's never been bettered...





2. Dolby Digital 5.1

Discrete domestic surround sound was born in 1995 with the introduction of Dolby Digital/ AC3 and we've never looked back. Adding in a second surround channel and a dedicated LFE track (compared to the previous matrix-based Dolby Surround format) turned film mixes into pure immersive, thundering bliss. And with Hollywood fully behind the concept (it kicked things off theatrically and in style with Batman Returns in 1992) there's never been a shortage of software, first with Laserdisc then DVD and beyond. Since then DTS has joined the party, and channel numbers have been upped to 7.1 and more. Is home cinema even home cinema without multichannel audio? The short answer is 'no'.







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Jovies that The Cinema



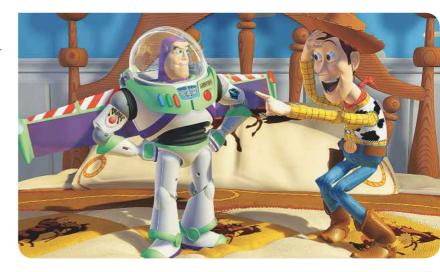
Team HCC picks its favourite flicks from every year of its existence. And by favourite, we mean blockbuster thrill rides guaranteed to get your AV system singing. Warning: contains George Lucas

1995: Toy Story

The world's first feature-length computeranimated film, Pixar's *Toy Story* is also one of the funniest, smartest and most

inventive 'toons yet put on the silver screen. The CG renders look a little basic in comparison with the mind-boggling work Pixar is doing these days, but at the time it was state-of-the-art stuff, dazzling us with visual trickery unlike anything that had been seen in animation before. And behind all the spectacle and razzle-dazzle was the captivating relationship between draw-string cowboy Woody (Tom Hanks) and astronaut action figure Buzz Lightyear (Tim Allen).

Toy Story had an oddball home media birth. It arrived on VHS and Laserdisc in 1996, but got a VHS re-release with bonus content in 2000 before making its DVD debut. Those who waited for the latter were given a THX-certified digital-to-digital transfer and rambunctious Dolby Digital 5.1 EX soundtrack to savour.



1996: Independence Day

Until this disaster movie/sci-fi obliterated box offices in the Summer of 1996, alien invasions on film had been about stealth rather than strength. *Independence Day* had its antagonists targeting Earth with brazen brutality, looming over entire cities and blowing up famous landmarks – just the sort of spectacle home cinema fans in the mid-90s were crying out for. Fox's Laserdisc became an instant demo favourite upon release in 1997 thanks to its seismic LFE track. Only 11 years later the Blu-ray repeated the trick.



MOVIES THAT ROCKED HOME CINEMA 27



1997: STAR WARS: SPECIAL EDITION TRILOGY

When George Lucas returned to the Star Wars universe to create Special Editions of his trilogy with revamped CG visuals, additional footage and new soundmixes, we all stormtrooped off to the multiplex to gawp. And when the SE versions appeared on DVD in 2004, they were quickly added to our collection. We did the same again in 2011 when the BD boxset was released. Why? Because this trio of sci-fi adventures are, for many, what home cinema is all about — perfect popcorn fodder replete with TIE fighters ripping through your speaker array. Altogether now: 'That's no moon!'

1998: SAVING PRIVATE RVAN

A film that set out to capture the unsanitised reality of warfare was always likely to have a terrifying soundmix, and Steven Spielberg's mud-splattered, WW2 drama delivered in spades. When ... Private Ryan surfaced on DVD and Laserdisc, we spun up the Omaha beach sequences and a legend was born. Here was an audio track that left you battered, bruised and with ears ringing, and AV-hedz spent many hours comparing the Dolby Digital and DTS 5.1 mixes.





1999: THE MATRIX

This was supposed to be the year when *Star Wars* made a triumphal return to cinemas. But as 1999 drew to a close, there was only one sci-fi on the minds of movie fans: *The Matrix*. Made for half the cost of *...The Phantom Menace*, the Wachowskis' film was an ingenious melding of gun-play, virtual reality and philosophy, with groundbreaking 'bullet time' action scenes thrown in for good measure.

The Matrix continued to surprise with its revolutionary DVD release, which used seamless branching to allow viewers to 'Follow the White Rabbit' while watching the film and jump directly into scene-specific behind-the-scenes featurettes. Hardly surprising, then, that it became the first DVD to sell over one million copies in the US.



Historical epics roared back into fashion at the start of the millennium when Ridley Scott and Russell Crowe teamed up for this big-budget Roman showdown, making a star of its leading man and putting its director back in the A-List. With its CG tigers, huge sets and classic tale of revenge, Gladiator had a sense of scale about it that harked back to Hollywood's 1950s heyday. Hungrily devoured on DVD, the movie's hi-def touchdown was ruined by an awful Blu-ray release. So bad, in fact, that Universal quickly issued another one.







2001: THE LORD OF THE RINGS: THE FELLOWSHIP OF THE RING

Peter Jackson proved that J.R.R Tolkien's fantasy novel wasn't 'unfilmable' with this barnstorming first part in his eventual trilogy. You just needed a huge budget, stunning locations, an excellent cast and some in-camera and CG special effects know-how. The initial two-disc DVD dazzled; the following four-disc Extended Edition rewrote the rulebook on what the format was capable of – even if it did split the film over two platters.



2002: BLADE II

This was a major year for sequels, with the *Lord of The Rings*, *Star Wars*, *Men in Black* and *Harry Potter* franchises all coming back for more. 2002 also saw *Spider-Man* swing into view, but it was a different comic book adaptation – *Blade II* – that stole the show. Here, Hollywood took a gamble on monstermad Mexican movie-maker Guillermo del Toro (last seen directing the subway slimefest *Mimic*) and he repaid it with an inventive slice of action cinema combining martial arts and horror to thrilling effect.

The eventual R1 Platinum Edition DVD cemented the film's status as a must-see. The image felt as sharp as Blade's teeth, and the disc packed (as was the habit back then) both Dolby Digital 5.1 EX and DTS 6.1 ES soundtracks, plus bags of extras.



2003: KILL BILL: VOLUME 1

Quentin Tarantino's ultra-violent homage to the martial arts and exploitation flicks of his youth struck a chord with cinemagoers in 2003. *Kill Bill* gave the indie filmmaker his biggest opening weekend to date – more than twice that of either *Pulp Fiction* or *Jackie Brown*. Annoyingly, the DVD release (and its sequel) suffered from an abundance of edge enhancement; Disney's 2008 Blu-ray put things right with a film-like AVC 1080p encode delivering bold colours (particularly yellow...), macabre blacks and plenty of detail. It's a disc that still gets dug out for demos today.

2004: SPIDER-MAN 2

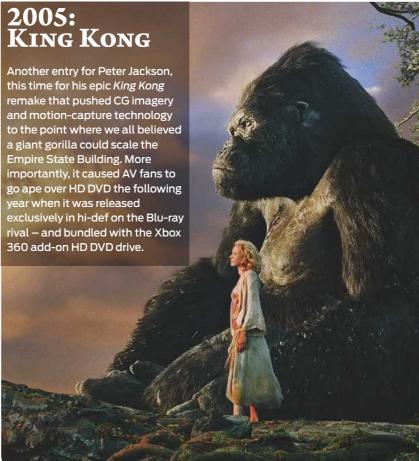
His first Spidey film seemed a bit subdued, but director Sam Raimi brought his A-game to this superior sequel, creating jaw-dropping demo sequences such as the web-slinger's train-top tussle with Doc Ock. There have been various Blu-ray and DVD releases, including a Superbit edition and Spider-Man 2.1. We bought them all!

2006: Casino Royale

Bond reborn? You better believe it. With Casino Royale, out went Pierce Brosnan, invisible cars and lame jokes, and in came Daniel Craig, parkour stunts and brutal violence. And for many home theatre owners, Bond 21 was the first Blu-ray title they felt they had to own, rocking a sublime AVC encode that showed the format at its best.









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2007:300

Director Zack Snyder gave the swords-n-sandals genre a 21st-century makeover with this ultra-stylish retelling of the story of the Battle of Thermopylae, based on the historical fantasy comic book series by fan-favourite Frank Miller. The cool part? Snyder's movie looked exactly like a graphic novel come to life, the result of painstaking bluescreen work and devotion to the source material.

The year's tenth-highest grossing film, 300 then went on to become one of the flagbearers for

HD DVD, thanks largely to its 'Bluescreen Picture-in-Picture' viewing mode – a feature that didn't see the light of day on Blu-ray until the US release of 300: The Complete Experience some two years later.

2009: Avatar

Do we really need to explain this one? James Cameron's sci-fi culture clash wasn't just the box office hit of the year (and still the biggest movie of all time), it also kick-started the current era in 3D filmmaking and the 3D TV boom. The irony is that it was only widely available on 2D Blu-ray for some time. Luckily, it looked spectacular 'flat', too.

2011: FAST FIVE

This OTT sequel features cars towing a bank vault through the streets of Rio de Janeiro, smashing through buildings on the way. It's the sort of stunt that even a James Bond writer in the '90s would have deemed silly, but *Fast Five* gets away with it. This was big, loud, dumb fun. Bet those who bought the *Fast & Furious 1-5* BD boxset feel a bit silly now though...









2010: How to Train your Dragon

DreamWorks Animation had been battling Pixar since the release of *Antz* in 1998, producing hits but never quite topping the work of the House of Mouse's CG off-shoot. That changed with 2010's *How to Train Your Dragon*, a razor-sharp comedy that matched its spectacular visual panache with an involving, original story. Scenes of dragons swooping through the skies provided some of the most convincing use of 3D to date when Paramount's good-looking Blu-ray landed in shops — once it had broken free of an exclusivity deal with Samsung, of course.







2013: GRAVITY

Alfonso Cuaron's space-bound thriller cut a swathe through cinemas courtesy of its tech-savvy production and groundbreaking Dolby Atmos soundmix – the film would go on to scoop three Academy Awards for its audio alone. *Gravity* still stands proud as one of the most accomplished science-fiction movies of the last fifty years, featuring a tight plot, absorbing 3D imagery, how-do-they-do-that visual effects and ceaselessly inventive sonics that put you right next to Sandra Bullock's death-defying astronaut. The eventual Blu-ray release remains one of our go-to demo platters – and Dolby Atmos adopters are advised to pick up the Diamond Luxe edition for extra surround sound panache.



2014: Transformers: Age of Extinction

The *Transformers* movies have become a byword for spectacular scenes of metallic destruction and thunderous LFE, put together under the watchful, manic eye of Michael Bay. This fourth entry in the battlin' bot series was no exception and on Blu-ray it brought new levels of carnage to your cinema room, being the first disc release to offer a next-gen Dolby Atmos mix. A six-week gap between US and UK

versions had AV-holics rushing to import ■

AND FOR 2015...

It's too early to call, but here are some contenders

Avengers: Age of Ultron



Marvel's second all-star superhero slobberknocker hits Blu-ray this September. Is there a home cinema fan anywhere not relishing the chance see what their system is really made of with the aid of its Iron Man vs. Hulk scrap?

Star Wars: Episode VII - The Force Awakens



The idea of a new Star Wars movie featuring the original cast is enough to get our blood pumping. And from what we've seen in the trailers, the Force looks strong with this one.

Fast & Furious 7



The automotive action series shows no sign of engine failure – this seventh instalment has been its most successful yet. Out on Blu-ray September 7 – check in next issue for our review.

Mad Max: Fury Road



Essentially a two-hour car chase, this has one the most insanely dynamic soundtracks we've ever heard. Let's hope the forthcoming BD release is up to the task!



ESTABLISHED IN 2006, the CEDIA Awards for the organisation's EMEA region have grown to become a favourite date in our calendar. Each Summer, the finest home cinemas and multimedia rooms designed by custom installers fight it out to scoop a winner's badge.

The range of categories covers everything from smallscale sub-£10k movie dens to wholehouse projects and gigantic screening rooms, while also celebrating lighting schemes, intelligent

racking solutions and retailer showrooms. The entries are judged by a panel including *HCC*'s very own Steve May.

Over the following pages we've highlighted some stunning entries (including some of the finalists that unluckily missed out on a trophy) that illustrate exactly what the professional install world is capable of. They include 4K/Dolby Atmos cinemas and quirky, themed theatres. Perhaps they'll give you inspiration for you own project...

This 15-seat cinema (above) scooped the prestigious Best Cinema Over £100,000 category



Best Home Cinema Over £100,000

Winner: MacBee

It's safe to say this room cost its owner a little more than a mere £100,000. The pride and joy of the boss of a chain of commercial multiplexes in India, it provides for playback of movies on the same day as theatrical release, using a DCI-compliant pro-grade Christie Solaria One + projector. In all there are 15 seats (a little down on the initial request for twenty) arranged over three rows — the most that could be sensibly fitted while retaining line of sight for the entire audience to the Vutec 2.35:1 screen.

Room-filling audio is delivered by a seven-channel JBL Synthesis system, albeit with no less than eight subwoofers, and power and processing comes from Yamaha's CX-A5000 and four Parasound A51 amplifiers. Dubbed The Red Carpet cinema, we think this is certainly a picture palace worth dressing up for.

www.macbee.in



Best Media Room Under £10,000

Winner: **H&H Audio Visual**

A new category this year awards movie dens that come in under £10,000. North London's H&H Audio Visual took the winning spot with this stylish loft conversion that partners a 5.1 KEF/Marantz audio system with both a 55in Samsung LED TV and drop-down projector screen. Home office, cinema and gaming room combined, this is über-slick. www.hh-av.co.uk

34 THE BEST OF THE BEST

Best Media Room Under £10,000

Finalist: Cornflake

Another eminently affordable media room, this time all about sneaking a high-quality TV experience into a snug that's otherwise designed for relaxation. The sound setup is 2.1, with ultra-slim on-wall Martin Logan speakers beefed up by a Velodyne subwoofer. Premium visuals come courtesy of a last-gen 65in Panasonic plasma. Control is done via an iPad/Crestron system with a charging dock mounted outside the room, just by the door, keeping the tech impact to a minimum.

www.cornflake.co.uk





Winner: **New Land Solutions**A cinema previously featured in

A cinema previously featured in the pages of *HCC*, this innovative install from the UK South Coast outfit features a rear seating row that rises out of the floor, a drop-down projector screen and a sliding sofa! The engineering nous required to make this demanding dream happen appealed to the CEDIA judges, as did the room's eye-catching styling and serious AV hardware. Specified kit includes Procella speakers, Runco projection, an Oppo Blu-ray spinner and Datasat's astonishing RS20i multichannel processor.

newland.solutions











36 THE BEST OF THE BEST





Best Home Cinema £40,000-£100,000

Highly Commended: The Big Picture

Lurking in the walls of this Midlands home cinema is a 13.4 speaker system designed for both Dolby Atmos and Auro3D surround sound, running in conjunction with a Datasat processor. The front wall houses a 4m side-masking projector screen, all the better for the owner to appreciate the 4K delights of his Sony VPL-VW500ES PJ. Smart lighting, including dimmable LED RGB ribbons, complete the package. Highly commended by the CEDIA panel.

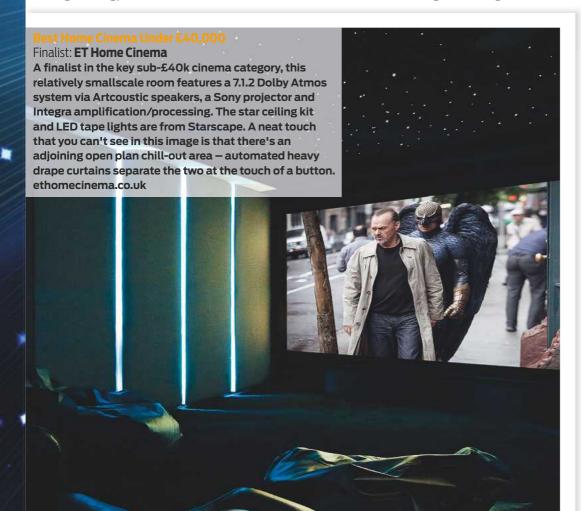
www.getthebigpicture.co.uk

Best Home Cinema £40,000-£100,000

Finalist: Gibson Integration

Ever wanted your room to mirror the aesthetics of your favourite movie palace? The owner here did, tasking London's Gibson Integration with recreating the ambience of Notting Hill's Electric Cinema. The result is a two-tier, eight-seater setup with table lighting and fabric-lined walls. The Triad surround speakers are all on show, but the LCR stage is hidden behind the 100in projector screen. Source kit includes a Kaleidescape server, Denon BD deck and Sky+HD.

www.gibson-integration.com



Best Dressed Rack

Winner: Cornflake

Most of us are happy with gear on a slab of AV furniture. In the pro install world, that just doesn't cut it. Winning this year's 'Best Dressed Rack' award is Cornflake, which had to design a solution for 50 separate components in an attic eaves space. This involved four bespoke 29U racks, all offering 90-degree turns for easy access, plus air-con to keep everything cool and acoustic treatment to stop the constant whirring upsetting the movie room next door.

www.cornflake.co.uk



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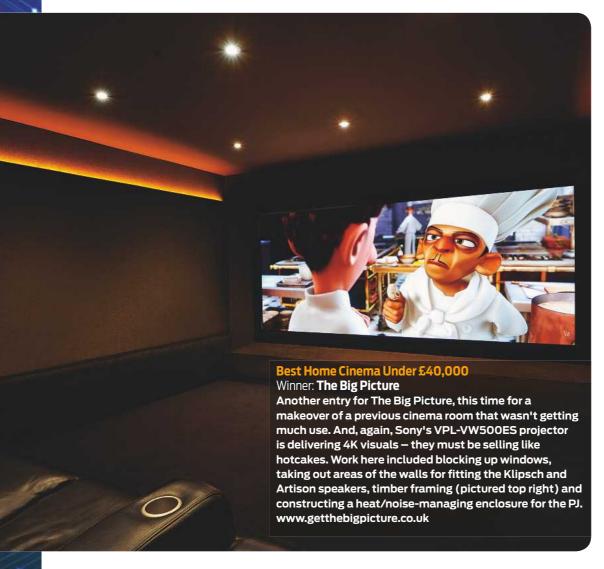


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City Home Cinemas, 750 Sidcup Road, London SE9 3NS. Tel: 020 8860 9363

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Best Media Room Over £10,000

Highly Commended: Kensington Audio Visual

On the top floor of a London townhouse sits this 'sun room' with eye-popping views of the capital's skyline. But what to do if you also want this birds' nest to double up as a cinema room? Install some automated overlapping blinds and heavy curtains, a 3,300-Lumen projector and retain the aesthetic by keeping speakers, projector and screen relatively hidden. Then you have the best of both worlds.

kensingtonav.com



Best Home Cinema £40,000-£100,000

Finalist: **Ashway Smart Homes**

When we think of basement cinema rooms we often imagine musty spaces filled with junk being given a spruce up. Yet this subterranean room designed by the West Yorkshire firm was dug out as part of an extension, giving them licence to create a sleek, modern space without compromise. Audio is 7.2 (but wired for further speakers if wanted) with an Epson EH-TW9200 handling HD imagery.

www.ashwaysmarthomes.co.uk





Best Home Cinema Over £100,000

Finalist: Archimedia

This luxurious-looking 20-seat cinema presented something of a challenge to the installers as the owner wanted its décor to match the rest of the property and to run it in non-blackout conditions. Therefore, a high-contrast screen from Stewart Filmscreen is joined by a high-brightness (16,000 Lumens) Digital Projection Titan projector. Also important was managing the performance of the sound system in such a large space and with so many seating positions. Additional surround speakers are mounted along the room's sides, while a quartet of Bowers & Wilkins subwoofers are positioned to provide an even bass response.

www.archimedia-me.com







40 THE BEST OF THE BEST

Best Yacht Installation

Winner: Archimedia Ahoy there! It wouldn't be the CEDIA Awards without a gong for some sea-going AV. This year's winning entry showcases the work done by Archimedia on a Gulf Craft Majesty yacht - a tech-tastic multi-space system featuring 'marine-grade' Sonance speakers outside, Bowers & Wilkins in-ceiling models inside. Mirror TVs in cabins to maximise the use of space and Blu-ray, satellite, Sonos and Apple TV sources. www.archimedia-me.com







WELL DONE!

CEDIA 2015: The Winners and Highly Commended

Best Media Room under

Winner: H&H Audio Visual

Best Media Room over £10.000

Winner: New Land Solutions **Highly Commended:** Kensington Audio Visual

est Dressed Rack

Winner: Cornflake

Best Home Cinema under £40,000

Winner: The Big Picture

Best Home Cinema

Winner: Art Cinema | 3Logic Highly Commended: The Big

Best Home Cinema over £100.000

Winner: MacBee

Best Lighting Scheme Winner: Brilliant Lighting

Best Yacht Installation

Winner: Archimedia

Best Showroom

Winner: De Opera Domotica

est Custom Solution Winner: H&H Audio Visual

Best Multiple Scheme or a Property Developer

Winner: Grahams

Highly Commended: Design

Innovation

Best Integrated Home 9,000,000 Under

Winner: Lifestyle Technologies **Highly Commended:** Grahams

Best Integrated Home £100.00Ŏ-£250.000

Winner: Woelf

Highly Commended: SONA

Best Integrated Home over£250,000

Winner: Défi Technique SA

Best Energy Management Solution

Winner: Défi Technique SA

Best Innovative Product

Winner: Habitech

Highly Commended: Rako Controls

For more info, visit www.cediaawards.org



















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REVIEWS

→ HARDWARE HIGHLIGHTS PANASONIC 50in 4K LED TV with Firefox OS, plus affordable Blu-ray player PMC Audiophile Twenty Series 5.1 speaker system SONY HT-XT3 Smart soundbase QNAP Four-bay NAS PIONEER Universal BD deck LIBRATONE Soundbar with style BLUESOUND Hi-res multiroom audio system ROUNDUP Three flagship TVs go head-to-head AND MORE



44 PANASONIC TX-50CX700→£900 approx FLOWER POWER Mila Kunis heads up the Jupiter Ascending cast, Blu-ray p96 HOME CINEMA CHOICE SEPTEMBER 2015



Firefox, 4K and a smart design make **Jamie Carter** an instant fan of Panasonic's TX-50CX700

Get the good life for less than grand

MANY WILL EXPECT a 50in 4K TV that sells for less than £1,000 to care little for design. Corners have to be cut somewhere. And yet Panasonic's £900 TX-50CX700 offers one of the most arresting style flourishes of all — two barely visible feet providing that 'floating look' that so many TV designers aim for but usually miss. This may be a budget TV, but it's a beauty.

If the design is surprisingly fresh, so too is the user interface. This is our first look at the much-hyped Firefox OS, a new approach to Smart TV employed by Panasonic to challenge Sony's Android TV, LG's WebOS and Samsung's Tizen OS-driven Smart Hub. It's officially called 'myHomeScreen 2.0 powered by Firefox', but it bears zero resemblance to the first iteration of myHomeScreen, which featured on the brand's 2014 crop of TVs.

Firefox isn't exactly a revelation, but it is highly impressive. It delivers a truly joined-up user interface where apps, inputs, external devices and catch-up TV are integrated and as one. It's also powered by a quad core processor, and is swift to navigate.

Firefox is minimalism at its best; the hub screen consists of a transparent carousel of icons — no more than four onscreen at any one time — that float over a live source. By default it contains large icons for Live TV, Apps, and Devices, but Firefox is all about customisation. Specific TV channels can be pinned to that carousel, as can individual sources, an app or two, or an input. For instance, it took me only a minute or so to get the carousel to host icons for BBC One, BBC iPlayer and Netflix.

There's a further dimension to Firefox that's something of an 'easter egg', only accessible if you hold down the remote's Home key for a few seconds. However, it's a largely fruitless hunt; this Info Pane page – the only visible remnant of the former myHomeScreen OS – does contain a useful list of Freeview HD channels if you scan to the left, but go

No touchpad zapper here, just a regular IR remote



anywhere else and you're greeted with pointless weather info, a blank notifications panel and thumbnails of random web videos. The latter is fed by Viewster and YouTube, and is at best awkward, at worst irritating.

As well as being the entry-level for the Firefox OS, the TX-50CX700 will play host to another welcome new feature; Freeview Play, the rival YouView platform that integrates catch-up TV into the Freeview EPG via a scrollback function. It hadn't gone live at the time of writing, but should be there now.

Another slight disappointment about the Firefox OS is that picture settings remain completely separate, though they've also been streamlined and are easier to skip through, being displayed as one continuous list.

The TX-50CX700 also marks the level where Panasonic TVs begin to use the upgraded Super Bright LED panel, which is self-explanatory in its ambitions. High Dynamic Range support is, however, not offered. Panasonic's latest 4K-centric Studio Master Colour and Studio Master Drive picture processing tech is onboard.

Connections include built-in Wi-Fi, three USBs, an SD Card slot and a trio of HDMI inputs, all at the 2.0 specification and offering HDCP 2.2 support.

Pristine pixels

The TX-50CX700 makes the most of its eight million pixels, with the overriding impression one of clean, pristine pictures from anything Full HD and over. You might assume that the

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Super Bright panel, which lends more lustre to colour performance, would impact on black levels and increase LED light leakage, but the TX-50CX700 remains spotless and accurate throughout *Grand Budapest Hotel* on Blu-ray. Using the well-judged True Cinema picture preset as a base to calibrate, the animated opening credits showcase the TX-50CX700's colour accuracy and blemish-free images, while during Gustav's ring-around of Europe's concierges the bold colours appear well saturated and the black suits of hotel staff contain plenty of shadow detail.

'Full HD pictures are crisp and that goes double for 4K material – Netflix's Marco Polo is packed with detail'

Motion handling is also impressive — to a point. As the Hotel Excelsior Palace's car rushes into shot, there's the expected loss of detail, but it's not disastrous. Activating Panasonic's Intelligent Frame Creation improves the situation, and helps to reduce film judder that's visible when watching Blu-ray discs. Such frame interpolation tech is routinely ignored by many home cinema enthusiasts, but it's getting cleaner with every passing TV. Keep it on its low or even midstrength setting and it lends a pleasingly smooth and clean look.

Full HD pictures are crisp and that goes double for native 4K material. *Marco Polo* from 4K Netflix features close-ups in Khan's pleasure dome that are delicately detailed, while the peak whites and sweeping colours of the Taklamakan desert's big, blue skies are beguiling.

Although the TX-50CX700 is 3D-ready, no Active shutter 3D glasses are included in the box. Get some spex, and you'll find that Super Bright panel does its job again, making

sure there's no discernible drop in brightness with stereoscopic material. That said, the blue of Earth in *Gravity* on 3D Blu-ray looked ridiculously over-saturated. There were also a few minor crosstalk issues as the astronauts bounced around the outside of the International Space Station.

The 4K era is not forgiving. While Blu-ray discs on the TX-50CX700 are upscaled with ease, standard-definition sources are left looking exposed. The 'ticking clock' opening sequence of *Back To The Future* on DVD appeared soft and ill-defined, while a broadcast of *The American President* on ITV 4 contained a lot of mosquito noise around actors and all moving objects. However, the TX-50CX700 does present a cleaner picture than many 4K TVs from 2014, so progress is being made. Besides, even compressed HD broadcasts contain some visible artefacts, with solarisation of colour blocks common.

The TX-50CX700 also trades in 4K digital files; as well as supporting Netflix 4K and Amazon Instant 4K thanks to its HEVC decoder, both MP4 and TS files containing 3,840 x 2,160 pixel material played stably and with excellent detailing, though uncompressed 4K MOV files aren't supported.

Watch TV or documentaries and the TX-50CX700 spits out clear, concise vocals from its two 10W speakers, and with no distortion at high volumes. However, the nuanced musical brilliance of *Grand Budapest Hotel* suffers from a distinct lack of mid-range body. Best head for the optical digital output and take everything to an AV amp and beyond.

Accommodating appeal

With superb colours, a welcome brightness boost and black levels that do just enough to convince, the TX-50CX700 makes a fine 4K canvas, while the presence of the easily customisable and impressively intuitive Firefox OS pushes Panasonic up the Smart TV pecking order. It may lack the stellar impact of high-end models, but its accommodating size and price will appeal to many

On the menu



→ The Firefox OS brings soft-edged, colourful charm to Panasonic's Smart TVs. And it's very responsive and easy to use

SPECIFICATIONS

3D: Yes
ULTRA HD: Yes. 3,840 x 2,160
TUNER: Yes. Freeview HD
CONNECTIONS: 3 x HDMI; 3 x USB; SD Card;
RGB Scart; headphone jack; component video;
Ethernet; built-in Wi-Fi; optical digital audio
output; RF input
SOUND: 20W

BRIGHTNESS (CLAIMED): N/A CONTRAST RATIO (CLAIMED): N/A DIMENSIONS: 1,126(w) x 652(h) x 47(d)mm WEIGHT: 23kg

FEATURES: myHomeScreen 2.0 powered by Firefox OS; Freeview Play (via update); HEVC codec 4K streaming support; Studio Master Colour; 4K Pure Direct; V-Audio Pro Surround; Voice Assistant; media playback via USB/DLNA/ SD Card; Screen Mirroring; Panasonic TV Remote 2 iOS/Android app; Swipe & Share between phone/tablet and TV; native 4K digital file support (MP4 & TS formats)

HCC Verdict



Panasonic TX-50CX700

→£900 approx → www.panasonic.co.uk → Tel: 0344 844 3899 **HIGHS:** Excellent design; quick & colourful Firefox OS; 4K sharpness; clean, noise-free images; appealing price **LOWS:** Only three HDMI inputs; motion blur; DVDs look soft



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Evolution, not revolution

THE STR-DN860 AV receiver may be light at just 8.3kg, but it arrives with a weight of expectation. Its predecessor was a best-seller for Sony, and this update boasts cool new multiroom functionality, improved HDMI connectivity and some luscious hi-res audio playback compatibility.

The receiver opts for a solid, streamlined look with no pull-down drawbridge. The only fascia acne are headphone and mic inputs, plus USB. As £400 AVRs go, it's among the best-looking ones out there.

Its design is based on a traditional frame and beam chassis. All four corners are embossed, to better support the power transformer and heat sink. There is other less obvious attention to detail too. Sony uses its own audiophile solder with bespoke ingredients. Can this possibly make a difference to sound? The brand says so. I just like the fact Sony's engineers have been mad enough to concoct it.

Connectivity is a tad lean, comprising a single HDMI out plus five HDMI inputs, one of which is audio only for a Super Audio CD

source. However, while all its HDMI video inputs claim to handle 4K, only one supports HDCP 2.2, the required copy protection for 4K content sources. All inputs can be upscaled to 4K, albeit limited to 30Hz.

There are also composite video inputs and a trio of stereo phonos, two optical digital inputs and a lone coaxial input. In addition to the Ethernet port, the AVR has integrated dual-band Wi-Fi and Bluetooth 3.0 with apt-X, as evidenced by the rear-mounted aerials which handle both simultaneously. There's also AirPlay compliance for those that like that sort of thing.

The remote control is best described as straightforward, with (not quite all) input access and playback modes clearly labelled. If you want to screen mirror your mobile, just hit the Mirroring button — no delving around in sub-menus. Alternatively, you can use your smartphone's one-touch NFC pairing.

The STR-DN860 supports a traditional seven-channel speaker layout, and comes with a selection of mood presets and post-processing modes that make use of those extra rears when you don't have anything native on Dolby TrueHD or DTS-HD MA. These include HD-DCS (Digital Cinema Sound), which claims to emulate the reflection and reverberation of Sony Pictures' celebrated Cary Grant dubbing stage. I've been in said theatre and it certainly doesn't sound as reverberant as this treatment makes out.

One interesting new addition is ceiling speaker compensation, which ostensibly lowers the front soundstage if you're using architectural speakers. I actually have in-ceiling speakers, but they're part of a rear surround array, so this mode was somewhat

irrelevant. There's also a centre lift function for those with low-slung centre speakers.

Controversially perhaps, there's no provision for Dolby Atmos or DTS:X. This shortfall should be a consideration if you're hoping to build a next-gen home cinema system around this receiver. Don't expect to find them on the step-up £500 Sony STR-DN1060 either.

I'm not sure I would be prepared to invest in a 7.2 AVR that doesn't offer a full set of modern codecs, even if it is only £400. Sure, the number of Dolby Atmos Blu-rays is relatively limited, but it's only going to grow. Rivals Onkyo and Yamaha (to name but two) have no such qualms about Atmos availability. Your opinion may differ, of course.

The user interface is an evolution of that first seen on Sony's ES



An AVR remote that isn't a button-fest – applause all round for Sony!

50 REVIEWS



models, which is good news as it's pleasingly intuitive. A graphic overlay provides tabs dubbed Watch, Listen, Custom Preset, Sound Filters and Setup. Each opens an appropriate draw of sub-menus.

The auto calibration routine is remarkably swift and does a passable job of calculating levels and distance. But the end result did need some massaging, particularly an over-cooked subwoofer level.

Indeed, a predilection for bass proves indicative of this receiver – it's fulsome in the extreme. This could partly be due to a newly-developed pre-amplifier IC, which Sony casually suggests enhances 'low tones.' Here, audio input selection, volume control and pre-amplifier are separated inside the IC and connected to separate ground pins, rather than collectively grouped together inside.

'The soundstage is wide and massive... Action sequences are delivered with weighty intent'

Whatever the reason, left to its own devices after auto calibration, the sound was thicker than festival mud. I reckon this receiver, probably because of its low ticket price, has been tuned with small monitors in mind.

If you're running with large speaker enclosures, you'll need to employ judicious bass management (remember the Large/Small speaker designation in the setup menus is not a reflection of actual physical size). The provision of dual subwoofer outputs can also contribute to a surfeit of LFE, so use cautiously. Overly aggressive sub levels trimmed and crossover suitably lowered, the STR-DN860 becomes somewhat more agreeable. There's also an equaliser which allows you to adjust bass and treble for each channel.

Sony rates power output at 150W perchannel into six Ohms. With all channels driven that's probably over-egging it, but it's not short of punch or volume. Action sequences are delivered with weighty intent. During the climax of Marvel's *Avengers Assemble* (Bluray), the Chitauri leviathan slams into New York masonry with vicious authority. The resulting soundstage is wide and massive. When Thor drops his hammer, the bass thump is tangible.

Similarly, as Robocop tackles the team of ED-209s in the glossy reboot, the action is deliciously immersive. However, while able to go loud, the STR-DN860 isn't particularly dynamic. It lacks the effortless transients that distinguish more gutsy performers. This isn't a criticism by the way, given the price point, merely an observation.

File format support from USB and across a network is extensive. Got a large collection of MP3s? Sony's DSEE HX digital sound enhancement engine will do a good job restoring some sonic girth to low-bitrate files. The receiver will also play AAC, WMA, 192kHz/24-bit WAV, multichannel FLAC, AIFF, APE and OGG, not to mention DSD 2.8MHz/5.6MHz five-channel recordings. The latter, streamed from a NAS, offered sublime detail and presence. It's here you realise just how nice this receiver can sound. On the right diet, its clarity is outstanding and spatial placement is very good.

Significantly, the STR-DN860 is Google Cast enabled and fits into Sony's multiroom wireless audio ecosystem, which is accessed via its SongPal app. This allows your home cinema to join in with any whole-home music casting you might get up to — provided you stick with Sony speakers using the same proprietary system.

A stepping stone to 2016?

The STR-DN860 is an entertaining AVR with forward-facing tech that belies its modest price. The lack of Dolby Atmos will give buyers cause for concern though, and the provision of HDCP 2.2 on only one HDMI could be a system breaker in a year or so — this smacks of being an interim product. That said, it's capable of an enticing sonic performance (after careful setup) and that multiroom interoperability could prove to be a real winner

On the menu



→ Usability is greatly helped by Sony's welldesigned interface. Here's an affordable AVR that won't frighten off novices...

Specifications

DOLBY TRUEHD: Yes. But not Dolby Atmos
DTS-HD MASTER AUDIO: Yes. But not DTS:X

MULTICHANNEL INPUT: No MULTICHANNEL OUTPUT (CLAIMED): 7 x

150W (into six Ohms) MULTIROOM: Yes. Second zone

AV INPUTS: 3 x composite; 3 x digital audio (2 x optical and 1 x coaxial)

HDMI: 5 x inputs (one with HDCP 2.2);

VIDEO UPSCALING: Yes. To 3,840 x 2,160 DIMENSIONS: 430(w) x 156(h) x 329(d)mm WEIGHT: 8 3kg

ALSO FEATURING: Sony wireless multiroom compatible; DCAC auto calibration; DLNA audio playback from USB and network; Ethernet; dual-band Wi-Fi; Bluetooth; AirPlay; Google Cast with Spotify; SongPal Link; front-facing USB input; twin subwoofer outputs; Centre Speaker Lift Up; In-Ceiling Speaker Mode

HCC VERDICT



Sony STR-DN860

→ £400 approx → www.sony.co.uk → Tel: 0207 3652413

HIGHS: Sony wireless multiroom compatible; a bombastic listen; good with hi-res audio sources; Google Cast-enabled LOWS: No Dolby Atmos or DTS:X support; can

LOWS: No Dolby Atmos or DTS:X support; can sound overweight; 4K upscaling limited to 30Hz; single HDCP 2.2 input







The beautiful CHROMIUM range - redesigned for 2015



Mark Craven luxuriates in the clear, crisp waters of PMC's Twenty Series speakers

The art of transmission

WITH ITS EARLY '90s origins in the world of pro audio, PMC is a well-known marque in hi-fi circles. It has collected accolades for its range of speakers that aim, in the company's own words, 'to replay the purest intentions of the artist without colouration.' It doesn't, in case you were wondering, make a soundbar.

Nor, in fact, does PMC sell a sub/sat system or anything else that might appeal to the cash-strapped movie fan. Cinephiles with bigger pockets, however, may be tempted by its Twenty Series of speakers, which now includes a dedicated centre channel model and subwoofer in its lineup. The idea being that you can enjoy PMC's premium ethos in a multichannel environment.

Taking the front left and right positions in the 5.1 system reviewed here is PMC's Twenty.26 floorstander – the flagship model in the Twenty Series. And, as the rest of the speakers feature similar technical and design attributes, it's as good a place as any to start.

A three-way speaker, the Twenty.26 features a lin tweeter, 2in midrange driver and 7in bass driver, arranged in that order from top to bottom on the front face. While the latter two are in-house PMC designs, the tweeter is a co-production with Norwegian acoustic noodlers SEAS. Dubbed a SONOLEX tweeter, this soft dome hides behind a bespoke grille that aims to widen high-frequency dispersion.

The Twenty.26 features PMC's traditional Advanced Transmission Line (ATL) system. In layman's terms, this means it's a ported speaker, only the port is a long tunnel (3.3m in this instance), damped with specifically-engineered absorbent material ('mere foam will not suffice,' says PMC). The claimed benefits include reduction in unwanted upper bass frequencies, a greater bass extension over a traditional ported or sealed speaker, and a consistent frequency response regardless of listening level.

Accommodating the transmission line and the pressure levels it generates requires some thoughtful interior construction. The cabinet is built from twin-veneered HDF, with panels ranging in thickness from 18mm to 35mm; the speaker is heavy (22.5kg) and resolutely inert. The styling is somewhat reserved, although the lean-back design (which aids time alignment of the drivers) and relatively slim width catch the eye. In addition to the walnut finish here, there are Oak, Amarone and Diamond Black options.

On surround channel duties are the Twenty.23s. Also floorstanders, these eschew the dedicated midrange driver in favour of a two-way design using a 5.5in mid/bass unit. Again, they use the ATL system, as does the Twenty.C centre channel speaker.

The Twenty.Sub reminds me of Q Acoustics' SUB 2070S, in that it stands vertically and employs two front-firing drivers (at roughly £3,000 it's about ten times more expensive than Q Acoustics' bass bin, though). Powering its dual 7in bass drivers (the same model as on the Twenty.26 floorstander) is a proprietary 400W Class D amp. Sonic fettling comes from onboard DSP (just to refine some bits and pieces, says PMC) and parametric EQ. Like its siblings, the woofer sports the same slender design and lean-back aesthetic. PMC says this form factor was decided upon as a result of speaking to consumers. Big, squat bass boxes are, apparently, going out of fashion.

Smooth mover

The stand-out impression of the Twenty Series in full-flight is that it is supremely musical,



AV Info

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'Turns multichannel mixes into works of art... audition if you like the finer things in life'



-

54 REVIEWS



for want of a better word. There's a wonderful smoothness to its performance, from its low-end poise to the higher-frequencies. Nothing is overblown, and there's simply no hint of unwanted resonance or distortion. The nuances and subtleties of recordings are therefore presented in all their glory. PMC's mission statement is accomplished.

When Quaid visits Rekall Inc (*Total Recall* 2012 remake, Blu-ray) and finds himself in a shoot-out, the speakers placed me right

'PMC's devotion to utter clarity and evenhanded delivery works wonders with music and movies too'

there in the gloomy room, cowering. The details in the DTS-HD MA mix, such as falling bullet shells or the sound of a rope being untied, were clean and distinct, with the PMCs countering a slight lack of attack with a healthy dose of naturalness and fleet-footed delivery. This array purrs like a well-oiled engine.

The two-way surround speakers, voiced to match the rest of the array, have presence enough to ensure panning effects and rear details don't peter out. And throughout the soundfield, there's a sense of the audio being dislocated from the speakers themselves.

The centre channel is no slouch. The most sensitive (90dB) of the system, it locks horns with the flanking speakers on the front

soundstage to build an appreciable wall of sound, and presents the dialogue channel with real projection and panache. This element of the *Total Recall* mix is very well-recorded, and it shows here. Conversely, the centre speaker is very revealing of some of the ADR work during *Skyfall*'s opening sequence.

Chris Nolan's cerebral sci-fi Interstellar perhaps showcases this 5.1 package at its very best. The film's soundmix seems tailor-made for these speakers' strengths, with the lengthy sequence where Matthew McConaughey and Matt Damon go for a stomp across the lunar landscape, and then have a fist-fight hampered by their ungainly space suits, proving rather emotional. The swirling, snow-laden winds whip around the soundfield with ice-cold precision, while the Twenty.C continues to enunciate dialogue with absolute believability - the anguish in Damon's voice as he confesses to his ruse is palpable. And throughout this scene, Hans Zimmer's organ-infused score raises goosebumps as it swells to a crescendo, the instrumentation sounding startlingly real. The way these speakers bring clarity and body to those crucial mid-range frequencies is astonishing. The result is complete immersion in the onscreen image – which is what home cinema audio is all about, really.

The new subwoofer actually struggles to make itself star of the show. A mitigating factor is that the bass performance of the front floorstanders is excellent in speaker terms, with the ATL design helping PMC to claim an extension down to 28Hz. What the Twenty. Sub is required to do is merely add some extra icing to an already well-decorated cake. It does this well, integrating flawlessly with the rest of the soundfield in terms of tone and presence, and showing it can pressure a room when required, as in the LFE-heavy scene in *Total Recall* when Quaid falls through the hole in Rekall Inc's floor. That said, I found myself wanting more vigour and slam at the very bottom-end.

As a last-gasp test of the array's mettle, I spun Machine Head's *This Is The End* (CD), a brutal five minutes of multitracked guitar riffs and double kick drums. I've heard this delivered as an unruly, disassembled mush on plenty of systems. Remarkably, the Twenty Series seemed partial to it. Sumptuous timing, clear instrument separation and rapid bass beats were the order of the day – I could barely stop my foot from tapping.

The art of noise

The styling of the Twenty Series isn't really to my tastes, and I'd hope for an extra level of unabashed slam from the subwoofer, but otherwise this a supremely accomplished premium speaker setup. PMC's devotion to utter clarity and even-handed delivery works wonders with music and movies too − turning bold multichannel mixes into works of art. Audition if you like the finer things in life ■

SPECIFICATIONS

TWENTY.26

DRIVE UNITS: 1 x 7in bass driver; 1 x 2in midrange; 1 x 1in SONOLEX soft dome tweeter ENCLOSURE: Transmission line FREQUENCY RESPONSE: 28Hz-27kHz SENSITIVITY: 86dB POWER HANDLING: 300W

DIMENSIONS: 190(w) x 1,062(h) x 439(d)mm **WEIGHT:** 22.5kg

TWENTY.23

DRIVE UNITS: 1 x 5.5in mid/bass driver; 1 x 1in SONOLEX soft dome tweeter ENCLOSURE: Transmission line FREQUENCY RESPONSE: 29Hz-25kHz SENSITIVITY: 87dB POWER HANDLING: 150W

DIMENSIONS: 152(w) x 918(h) x 330(d)mm WEIGHT: 13.2kg

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DRIVE UNITS: 2 x 5.5in mid/bass drivers; 1 x 1in SONOLEX soft dome tweeter ENCLOSURE: Transmission line/ported FREQUENCY RESPONSE: 45Hz-25kHz SENSITIVITY: 90dB POWER HANDLING: 200W DIMENSIONS: 520(w) x 172(h) x 305(d)mm

TWENTY.SUB (SUBWOOFER)

DRIVE UNITS: 2 x 7in bass drivers
ENCLOSURE: Sealed
FREQUENCY RESPONSE: 22Hz-200Hz
ON BOARD POWER: 400W
REMOTE CONTROL: No
DIMENSIONS: 200(w) x 577(h) x 516(d) mm
WEIGHT: 23kg
CONNECTIONS: Balanced XLR stereo input
(phono unbalanced adaptor provided);
balanced XLR stereo output; AES XLR input/

HCC Verdict

output



PMC Twenty Series 5.1

→ £12,500 approx → pmc-speakers.com → Tel: 0870 444 1044 **HIGHS:** Smooth, even-handed and clear delivery; slender form factor; great for music; excellent centre speaker **LOWS:** Not the most stylish cabinets around; subwoofer more fluid than frightening



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Sony's shining star

THE HT-XT3 IS a soundbase with a Smart heart. Sony's £450 newbie flaunts Wi-Fi, Bluetooth, app control, multiroom support, screen mirroring and media streaming, while its conservative rivals offer little more than an optical audio socket. And it does all this remembering that sound quality still matters.

As a 2.1 design the HT-XT3 doesn't make any bold claims about virtual surround sound. The driver array mixes a pair of underside 4.5in woofers with coaxial mid/highs on the front fascia. These suspend an 18mm dome tweeter atop a 65mm Magnetic Fluid midrange unit. Total power is rated at 350W, with 120W going to the woofers.

Tasked with bringing some sonic flair to Dawn of the Planet of the Apes (Sky HD), the HT-XT3 performs admirably and displays healthy dynamism; big audio events sound like big audio events. When a grizzly bear makes a sudden appearance during the opening forest hunt sequence, I almost jumped.

Its low-frequency punch is good. Not trouser-flappingly fantastic, but meaty enough to cherish the bass throbs that modern movie soundtracks are littered with - and nuanced too. The sequence in Godzilla (2014, Blu-ray) where the soldiers encounter the M.U.T.O. by the railway bridge is resplendent

with distinctive low grunts and thumps. And with music, it rolls along nicely with the basslines in Mudcrutch's Scare Easy. The HT-XT3 has an inviting, slightly warm tone that will suit most tastes.

A button on the handset offers a subwoofer level adjustment. I found the default a little shy, so nudged it up to maximum. This had the effect of swamping the soundstage entirely. Go too far the other way and bass completely disappears. Be careful.

There are other user tweaks on offer, including preset 'soundfields' for Movies, Music, Sports, Game Studio, Standard and Clear Audio+. The latter claims to automatically adjust the sound settings 'for an enriching listening experience' from your music collection. I found any difference between it and the Music preset was negligible



Lift up the HT-XT3 to sneak a peek at its twin bass drivers



 both sounded nicely balanced. The same can't be said of the Sports mode, which attempts to create some stadium ambience by mushing up the soundstage. Weird.

Detail delivery drivers

The HT-XT3 has a crisp, high-frequency performance, which makes soundtrack details, such as the cocked hammer of a handgun in *Transporter: The Series* (Sky HD), stand out. Compared to my flatscreen, the difference is as clear as night and day – even *Coronation Street* becomes more dramatic

My main issue with the Sony's audio performance is that its soundstage is rather narrow. It could do with widening out. Tomtom drum rolls shows the limits to its range. W.A.S.P. drummer Frankie Banali's kit sounds small as opposed to the glam rock excess it should be. With movies, this tight soundstage limits the impact of kinetic onscreen action — *Transporter*'s Marseille car chase doesn't feel as broadly staged as it probably should. However, it's still engrossing, with snarling engines thrust forwards.

Connectivity is generous, with a trio of HDMI inputs tethered to an HDMI output (with ARC). Much of the soundbase competition doesn't offer any HDMI switching at all. The specification is 2.0, with passthrough of 4K up to 60Hz. HDCP 2.2 compatibility is offered on the HDMI 1 input and the output.

The 'base is supplied with an optical cable. All very welcome, but I quickly discovered that

to get the slickest user experience from the HT-XT3 you need to hook up via HDMI, as that way you can access the PS-style XMB onscreen display. Go here and you can make the initial Bluetooth activation. Hitting the 'Pairing' button on the remote won't get you anywhere until you've done this.

Many (but not all) of the functions accessible from the onscreen menus are mirrored on the app controller. This proves better in terms of operation than using the standard remote. With the latter, changing inputs is a case of scrolling through the options on the soundbase's tiny front display; the app offers graphical icons and is pretty responsive. On the other hand, simple volume tweaks are quicker on the zapper. I ended up operating the HT-XT3 with a combination of both.

The style options for soundbase speakers are quite limited, and the HT-XT3 is, in essence, a black oblong. Sony adds some glamour with a shiny glass top plate, although this is quite reflective, and will in all likelihood be directly below your TV screen. Build quality seems very good, and the unit is much heavier (10.5kg) than I imagined. Screens up to 65in and 50kg are supported.

The last word

Crisp and balanced audio, a barrage of features and an unobtrusive design − Sony's HT-XT3 delivers where it matters. Operation can be complex the more you want to do with it, but that's a minor concern. I like it ■

SPECIFICATIONS

DRIVE UNITS: 2 x 4.5in woofers; 2 x coaxial mid/high drivers AMPLIFICATION: 350W

CONNECTIONS: 3 x HDMI inputs; 1 x HDMI output (ARC); Ethernet; optical digital audio input; USB; 3.5mm analogue audio input DOLBY TRUEHD/DTS-HD MA: Yes SEPARATE SUB: No REMOTE CONTROL: Yes

DIMENSIONS: 750(w) x 83(h) x 358(d)mm **WEIGHT:** 10.5kg

FEATURES: Bluetooth 3.0; NFC; built-in Wi-Fi; Google Cast; compatible with Song Pal app; Sony multiroom support; ClearAudio+, Clear Voice, Movie, Music, Night, Sports, Standard modes; S-Master HX digital amplifier; DSEE HX compressed audio upscaler; 4K passthrough; HDCP 2.2



HCC VERDICT

Sony HT-XT3

→£450 approx → www.sony.co.uk → Tel: 0207 3652413 **HIGHS:** Crisp, clear and well-balanced audio; excellent connectivity; unobtrusive design; loaded with Smart features **LOWS:** Quite a narrow soundstage; tiny front display; reflective top plate











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John Archer pits his wallet against three of the year's most high-end, cutting-edge TVs to find out which one is best equipped to make your home cinema dreams come true



55EG960V

The 4K OLED screen and super-slim design are the two main attractions of this 55in range-topper

KD-75X9405C The Wedge design returns – this huge screen should sound huge too...

UE65JS9500

Back on our test benches after an impressive debut, is this HDR-ready LED still the TV top dog?

LG 55EG960V

Representing OLED in our high-end TV tussle is this curved, 4K style icon from LG



OLED TECHNOLOGY HAS finally gone from being the stuff of AV fantasy to a living, breathing reality you can actually buy. What's more, you can actually already buy it for less than you might imagine. The 55in 55EG960V costs £3,800, despite being only the second native 4K/UHD OLED TV we've seen. That makes it the most affordable set in this roundup, albeit at a smaller screen size. Expect to pay £6,000 for the 65in model of the 960V series.

So what does your money get you? Good looks, for starters. The combination of an insanely thin body (an OLED trademark) and distinctive curved screen make this the prettiest TV in town.

The 55EG960V ticks the right connections boxes, too, with its three HDMIs, three USBs and the now essential Ethernet and Wi-Fi network options. The USBs support external recording from the set's tuners, the HDMIs support 4K sources up to 60Hz, and the network options let you stream multimedia

from DLNA devices or go online with LG's walled garden of content. Apps include Amazon, Netflix and Now TV, but the BBC iPlayer and Demand 5 catch-up apps aren't joined by 40D or the ITV Player. There's no sign of

'The LG OLED screen offers a groundbreaking black level performance'

the integrated YouView or Freetime services now offered by some rival Smart TVs, either.

The 55EG960V has a Smart TV ace up its sleeve, though: LG's webOS 2.0 system (versus the old webOS iteration found on the previously

tested 65EC970V OLED TV). Despite not advancing significantly from its 2014 debut, the webOS 2.0

> and laser-like focus on streamlining access to your favourite content makes it the system to beat.



Blacks you can believe in

Spend time setting up the 55EG960V and it delivers on OLED's contrast promise (since it uses self-emissive pixels rather than a shared external backlight) spectacularly well. At least when it comes to the black end of the contrast spectrum.

Take, for instance, the infamously dark scene where The Bride is buried alive in Kill Bill: Volume 2. There's no hint

of the grey mist effect that's always present to some extent on any LCD TV, and this groundbreaking black level is achieved without any backlight inconsistency or clouding.

What's more, when The Bride manages to get her torch on, the 55EG960V does an incredible job of rendering the torchlight with a degree of intensity its LCD rivals just can't match — while at the same time keeping the dark picture that surrounds the torchlight looking beautifully rich and natural. Self-emissive pixels, we salute you!

The 55EG960V is also capable of serving up gorgeously punchy colours. The vibrant sequence where The Bride fights Vernita Green in *Kill Bill: Volume One* is a riot of colour, and for the most part, this riot doesn't tip over into an unruly free-for-all of unbalanced, unnatural tones.

Also easy on the eye is the way LG's OLED TV delivers the detail and depth we've come to associate with native 4K content.

You can see every blade of grass, every bead of sweat and every tattoo on our stunning 4K World Cup footage. It's a respectable upscaler of non-HD material, too. It doesn't reproduce HD sources with quite as much detail and sharpness as our other two contenders, but it does do a fine job of kicking

None too bright

source noise into touch.

The simple pleasure of seeing a screen able to deliver a contrast range as extreme as the 55EG960V may have some of you already reaching for your wallets. But before you hand your cash over, there are a few issues to report.

The strangest of these concerns that phenomenal black level response. Bizarrelv. despite OLED technology's self-emissive nature, if you push the TV's brightness setting too high – anywhere beyond its mid point - those blacks suddenly dissolve into a most unOLED-like greyness. Increasing the brightness past the 50 per cent 'safe zone' also causes the appearance of a distracting banding effect, where the screen's brightness reduces in clearly defined steps from the centre outwards. You can occasionally notice this issue even with the brightness restrained, in the form of a slight vignetting effect at the edges of bright, motion-packed content.

For the most part you can calibrate out the 55EG960V's unexpected problems – but only, of course, at the expense of a chunk of brightness versus the sort of luminance levels

Slim design is a happy by-product of OLED technology

we're now seeing radiating forth from the best new LCD TVs – including, especially, the Samsung UE65JS9500, reviewed over the page...

So the 55EG960V is perhaps a slightly unsatisfying option for a bright room. Also, the need to limit its brightness may compromise it with HDR (High Dynamic Range) content once a promised HDR update for the TV goes live. It could equally be that its profound contrast is perfect for HDR. There's no way of knowing until we see it for ourselves. One seemingly definite limitation to the 55EG960V's HDR abilities, however, is that it won't play ball with forthcoming HDR UHD Blu-rays; LG tells us that only HDR internet streams will be supported. This is a shame when Sony and Samsung both claim their contenders will handle HDR from external sources.

Other odd things about the 55EG960V's pictures include the

way parts of darkish images can occasionally look infused with vague pink or green tones, and tonal blends that sometimes lack the subtlety I usually see with 4K screens.

Firing up *The Box Trolls* in 3D on the 55EG960V results in one of the best 3D performances I've seen. There's no serious flicker or crosstalk, while the screen's 4K panel counteracts the reduced resolution usually associated with passive 3D. Motion suffers slightly with judder, but otherwise the 55EG960V's 3D performance is stellar.

Unlike its audio. It doesn't sound bad for an insanely thin TV, but the lack of the Harman/Kardon audio system found on the 2014-era 65EC970V leads to a lack of bass extension and mid-range clarity. I also found some occasional lip-sync timing issues when watching 3D.

SPECIFICATIONS

JD: Yes. Passive ULTRA HD: Yes. 3,840 x 2,160 TUNER: Yes. Freeview HD, satellite CONNECTIONS: 3 x USB; 3 x HDMI; CI slot; RF in; Scart; composite video in; component video in; optical digital audio out; PC audio input; Ethernet; RS-232C; headphone out; integrated Wi-Fi SOUND: 20W

BRIGHTNESS (CLAIMED): N/A CONTRAST RATIO (CLAIMED): N/A DIMENSIONS (OFF STAND): 1,226(w) x 719(h) x 49.9(d)mm

FEATURES: USB multimedia playback; DLNA support; OLED self-emissive pixel technology; webOS 2.0 Smart system; Tru HD Ultra Engine; ColourPrime panel; Dynamic Colour Enhancer

On the subs' bench

LG 65UF950V: Save a few quid and get an increase in screen size with LG's 65in UF950V LCD model. Like its OLED stablemate, this £3,200 4K TV carries the 2.0 iteration of webOS, but opts for a traditional flat design. The panel is of the IPS variety, promising to major on viewing angle and colour punch — aided by LG's ColourPrime wider colour gamut technology. Image fettling is handled by the brand's top-tier Tru Ultra HD Engine Pro suite.



Samsung UE65JS9500

This flagship 4K LED set introduces buyers to the world of High Dynamic Range video



SAMSUNG'S UE65JS9500 IS certainly expensive for a 65in TV. Even a UHD 65in TV. But Samsung would argue the specifications of its flagship 'SUHD' display (don't ask what the 'S' stands for) more than justify the $\pounds6,000$ price tag.

For starters, it's phenomenally bright. Its new panel design combines with a direct LED lighting engine (driven by local dimming for enhanced contrast) to serve up a claimed peak luminance of 1,000 Nits – not far off double anything you'll realistically get from the other two sets featured in this roundup.

Also helping to justify the UE65JS9500's cost is its Nano Crystal colour tech. Based on Quantum Dot wavelength manipulation systems, Samsung claims it's capable of delivering a much wider colour space than normal LCD TVs. As much as 93 per cent of the Digital Cinema Initiative (DCI) colourscape, in fact.

The really key thing about the UE65JS9500's groundbreaking panel design

is that it makes the TV arguably the first able to deliver effectively on the thrills of the new High Dynamic Range video format. In fact, unlike the LG and Sony contenders in this grouptest, it already offers HDR support; American models already take HDR streams from Amazon's Prime services that will hopefully soon appear in the UK, and UHD Blu-ray HDR support is promised via a firmware update later this year.

Stand-out style

Design-wise, the UE65JS9500 oozes a certain high-end charm. Its bezel stands out from much of the competition by virtue of its glinting, chamfered metal finish and the way it angles back from its outer edges towards the panel. The design seems to funnel you into the picture, an effect enhanced by the fact that the

UE65JS9500 features a distinct curve to its frame. Samsung is the most vociferous of the TV brands when it comes to this new-look design – you'll currently struggle to

find a flat model anywhere near the top of its range.

This TV does stick out quite a lot around the back, though: there's an unexpected chunk of rear-side bulk. From the front, of course, you won't notice this at all, but if you want to wall-hang the screen it may look a bit ungainly.

The TV's connections are all housed on Samsung's now familiar external One Connect box, bundled with the TV. This will reassure future-gazers, in that future standards can, in theory,



be accommodated just be replacing the box. Inputs on this iteration include a quartet of HDMI ports, four USBs and Ethernet. Naturally, the TV will connect to your home network via Wi-Fi, and voice control and motion control are both provided for those who want to pretend they're in a sci-fi film.

Easy as Pi

To begin my audition I played some HDR UHD clips of *Life Of Pi* that Samsung supplied me with, and the results were mind-bogglingly good. They exhibited levels of contrast and colour I've never witnessed before, and which left the old Blu-ray version of the film looking

'Samsung's set delivers perfectly on the visual impact we want from 4K'

almost shockingly flat and washed-out by comparison.

Your first impression of HDR is striking, with astonishingly bright and pure whites sitting alongside wonderfully dark blacks. The contrast range for an LCD TV is instantly dazzling. As a taster of a potential HDR future, it certainly whets the appetite.

And there's more to HDR than peak brightness, of course. Colours also enjoy extremes of tone. *The Life Of Pi*'s zoo scenes and the legendary sequence where the whale rises out of the glowing night-time sea showcase high levels of saturation. Coupled with its brightness talents, the result is an image that startles with its visual punch.

That's not to say the UE65JS9500 doesn't also rock with 'current-gen' material too. My native 4K World Cup content looks spectacularly detailed, sharp, bright and clean, as Samsung's flagship set delivers perfectly on that 'window on the world' sensation we associate with the best 4K experience. Its upscaling of lower-resolution sources is profoundly good too, handling every last segment of *Kill Bill*'s varied palette and levels of grain with complete confidence, delivering a clearly higher-resolution image largely free of unwanted noise or a processed look.

Motion handling is generally impressive, with a clean and natural image whatever your source material, and the active 3D delivery is as spectacular as it gets. The Samsung's combination of huge brightness, massive contrast range and 4K panel make your 3D Blu-ray collection worth holding on to.

Samsung's panel claims a 1,000 Nit peak brightness

For all its truly next-gen brilliance, the UE65JS9500 isn't perfect. Its curved screen could lead to distorted image geometry for viewers who aren't sat reasonably opposite the TV, and the curve can also distort onscreen reflections if you can't carefully control your room's lighting. On the other hand, the curve can also increase your sense of immersion if you're sat in or near the sweet spot.

Samsung's local dimming system can cause a few examples of backlight blooming around bright objects if you don't use it on a relatively low setting. And, just occasionally, once the picture has been optimised to minimise backlight clouding and blooming, I felt that with HDR content I was missing out on a little shadow detail. The proof of this TV's HDR talents will only really be fully known once plenty of content is available.

Samsung has built a 4.2-channel driver array into this set, but the truth is that its audio performance isn't nearly as good as that of its Sony rival (over the page). It's not a bad effort, with a

fairly large soundstage and decent mid-range body, but the low-end lacks finesse and can leave the speakers sounding strained.

Smart TV fun comes via the brand's new Tizen system, which is an improvement upon previous Samsung portals but still a touch over-complicated. The good news is that it's laden with catch-up and video-ondemand apps. Meanwhile, the provision of twin Freesat and Freeview HD tuners ushers in viewing flexibility.

The latter features join with the UE65JS9500's mostly barnstorming, HDR-friendly UHD pictures to create an exceptionally enticing TV all-rounder. And there's no doubt that this set aligns Samsung inexorably with a TV future that frankly just can't get here fast enough. Easily recommended.

SPECIFICATIONS

SOUND: 60W

remastering engine

3D: Yes. Active
ULTRA HD: Yes. 3,840 x 2,160
TUNER: Yes. Freeview HD x 2; Freesat HD x 2
CONNECTIONS: 3 x USB; 4 x HDMl; CI slot;
RF in; Scart; composite video in; component
video in; optical digital audio out; PC audio
input; Ethernet; headphone out; integrated
Wi-Fi

BRIGHTNESS (CLAIMED): N/A
CONTRAST RATIO (CLAIMED): N/A
DIMENSIONS (OFF STAND): 1,450(w) x
838.3(h) x 125.3(d)mm
WEIGHT (OFF STAND): 32.3kg
FEATURES: USB multimedia playback; DLNA
support; Tizen Smart system with full suite of
catch-up services; Nano Crystal colour
technology; HDR playback support; curved

design; Precision Black Pro local dimming; SUHD

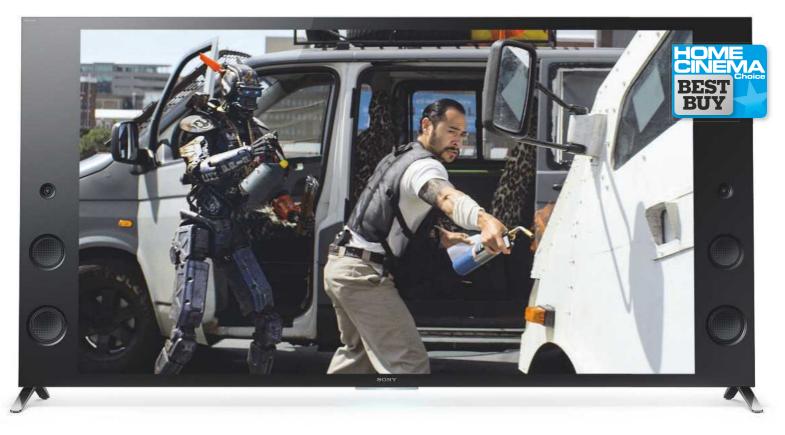
On the subs' bench

Samsung UE55JS8500: If you want to experience the bright delights of Samsung's SUHD panels, you don't need to look just to the top of its product range. Two further series (JS9000 and JS8500) offer screen sizes of 65in, 55in and 48in, with pricing falling from £4,000 to £2,100. The UE55JS8500 looks particularly tempting, with its 55in screen size probably the most suitable for many setups, and the £2,350 ticket not out of this world. Check back next issue for a full review.



Sony KD-75X9405C

With its bold design and 75in panel, this TV puts the 'big' into bigscreen entertainment



IF THE CURRENT trend is to try and minimise the space the new generation of TVs take up by giving them incredibly slim frames, Sony's KD-75X9405C is the untrendiest TV of the year. It's not just content with assaulting your living room space with a vast 75in screen; this monolithic beast adds sidebars down each side of that screen, making it look more like an 85in set.

There's method to Sony's aesthetic madness, though. Built into these left/right bars are six of the most powerful speakers the TV world has ever seen. Or rather heard.

The four main mid-range and bass drivers use Sony's Magnetic Fluid technology, and this screen proudly wears a Hi-Res Audio badge, showing it's capable of playing back your 96kHz/24-bit music collection in formats including FLAC and WAV. Onboard DSEE HX upsampling caters for other sources.

The KD-75X9405C takes its picture duties just as seriously. Its LCD panel is illuminated by LEDs arranged directly behind the screen rather than around its edges. This should deliver a superior contrast performance, especially as it's supported by local dimming,

where different clusters of the backlights can have their output controlled independently.

Sony is also keen to talk up its new X1 video processor. This builds upon the success of Sony's X-Reality Pro predecessor by offering an expanded database of different picture types –

'Seeing 4K writ large on Sony's 75in TV is an experience every movie fan will love'

now including multiple 4K delivery formats – to streamline the processing, erm, process, to deliver more effective results. It also builds in a host of specific improvements, such as a far more precise colour engine, improved upscaling and more advanced noise handling.



last year's homegrown
'Discover' menus
are both YouView
— complete with
'scroll back' electronic
programme guide
access to on-demand
content — and the new
Android TV platform.

At the time of writing YouView hasn't yet been implemented; it should make for a very welcome addition when it does turn up. I'm unconvinced by the Android system, though,



SONY

which feels like a step back to an earlier, cluttered, unfocused era of Smart TV thinking.

Sony's 75in beast provides 3D using the Active system, and is, like the LG OLED, going to support HDR content following a firmware update later this year. And Sony insists this support will run to HDR playback via HDMI from upcoming UHD Blu-rays.

Larger than life

While I'd argue all day long that you don't need a massive TV to love 4K, there's also no doubt that it helps. And seeing it writ large – and brilliantly so – on the KD-75X9405C is an experience no movie fan could fail to fall in love with.

As well as having the screen acreage to make you feel the impact of those extra millions of pixels, Sony's processing engine and panel design are good enough to underline the detail with some gorgeously expressive and subtle colour reproduction and some of the finest handling of shadow detail and greyscale subtleties I've seen from an LCD screen.

And the deftness of the TV's colour and greyscale handling hardly diminishes at all during predominantly dark scenes, thanks to a barnstorming contrast and black level performance. It doesn't hit the same black level depths LG's OLED is capable of, but its local dimming system is good enough to leave images nice and punchy, especially when you factor in the screen's rich colour palette, which avoids the slightly bleached look that can creep into the rival screens when you push them to reasonably high brightness levels.

The 75X9405C achieves its dynamism while suffering remarkably little with backlight inconsistencies, a failing that hinders its more affordable (and ultra-slim) stablemate – the X9005C reviewed in the last issue. I did spot some low-level light 'blooming' around bright objects during off-axis viewing, but stay reasonably in front of the set and its bright highlights seldom draw attention to the lighting mechanisms making them possible.

Another great trick of this premium display is that it delivers its picture thrills more or less right out of the box, courtesy of probably the best auto-optimisation system in the TV world. The only exception to this involves the upscaling engine; while this certainly advances on Sony's already impressive 2014 efforts, it occasionally goes a bit too far, leaving HD

sources looking noisy if they were slightly noisy in the first place, such as the sequences in the desert around Budd's caravan in *Kill Bill*.

Fortunately there's a pretty easy fix for this; just drop the Resolution part of the Reality Creation upscaling circuitry to around its 35-40 level from its 65 default.

There are other small issues with the 75X9405C's pictures. The screen is a little reflective, making it worthwhile blacking vour room out if you want to indulge in a serious movie session. Also, the edges of the boxes preserving the box trolls' modesty in the film of the same name exhibit a little crosstalk ghosting in 3D mode, at least when there's a large group

in shot, and just occasionally the set's colours can come on a little strong with the Live Colour option activated.

One other potential issue when the HDR update is released is that the KD-75X9405C isn't as bright as Samsung's UE65JS9500, and so may not be as well equipped to deliver the full extent of HDR's impact. But the peerless richness of its colours may prove more than ample compensation for a little lost brightness.

That's pretty much all I can come up with in the negative department — especially as this set's sound quality is beyond reproach. Its combination of raw power, huge dynamic range, epic soundstage, treble precision and thumping but never overpowering bass is so far beyond the built-in TV sound norm that it's almost silly.

Whether you're watching or just listening to it, the 75X9405C is a sensational television — and one which feels like pretty good value considering what's on offer ■

SPECIFICATIONS

3D: Yes. Active **ULTRA HD:** Yes. 3,840 x 2,160 **TUNER:** Yes. Freeview HD, satellite **CONNECTIONS:** 3 x USB; 4 x HDMI; CI slot; RF in; Scart; composite video in; component video in; optical digital audio out; PC audio input; Ethernet; headphone out; integrated Wi-Fi; subwoofer line out **SOUND:** 90W (4 x 12.5W, 2 x 20W) BRIGHTNESS (CLAIMED): N/A
CONTRAST RATIO (CLAIMED): N/A **DIMENSIONS (OFF STAND):** 192.9(w) x 991(h) x 110(d)mm **FEATURES:** Triluminos panel design: X1 processor; Android TV Smart platform; YouView Smart platform (by forthcoming firmware update), Magnetic Fluid speaker design; hi-res audio playback with FLAC and WAV support; optional wireless subwoofer; X Reality PRO; X-tended Dynamic Range PRO: Direct LED backlight; local dimming

On the subs' bench

Sony KD-65X9305C: The 75in model on test here is unique in Sony's flatscreen product line. If you want a smaller screen size you have to lose some features – the 65in (and 55in) X9305C models (note they're not called the X9405C) employ edge rather than direct LED illumination, and offer a less advanced version of the brand's X-tended Dynamic Range processing. They do, however, share the side-mounted speaker system, wedge design and Android Smart TV interface.



Final standings

THREE TOP-FLIGHT SCREENS doing battle... this has been both the best and grimmest grouptest to put together. The best because I've been faced at practically every turn with stellar picture quality, the like of which the TV world hasn't seen before; and because the different approaches of the three models has shown that the bigscreen market remains innovative. So why the grimmest? Because I'm now supposed to try and put these three brilliant sets in some sort of order of preference. Woe is me.

THE BOTTOM LINE is that provided you're prepared to make some picture adjustments to get the best from them, any of this trio of TVs will give you a level of performance that wouldn't have seemed possible 12 months ago. All three are worthy of Best Buy status. However, I have managed to come up with a favourite.

In joint second place are the Samsung UE65JS9500 and LG's 55EG960V. These sets both appeal, it seems to me, to very different audiences. The ultra-bright Samsung is comfortably the most forward-thinking TV of this generation (that external connection box and high brightness stand out), and so will suit tech lovers content to wait for the full potential of their expensive new screen to be unlocked. The incredibly contrast-rich LG, on the other hand, feels like the ultimate way to indulge in the picture formats and options

of today. OLED technology, while still not mainstream, has immediate image benefits that are tailor-made for movie fans and make the LG screen something of a unique proposition. But it lacks compatibility with HDR UHD Blu-rays.

No compromise

In the middle-ground between those two Korean challengers you've got the Sony KD-75X9405C: a product which seems to bridge the divide between yesterday and tomorrow with real sensitivity and care, and lets you experience unprecedented sound quality while it's doing it. Yes, it's absolutely bleeding massive and the most expensive model reviewed here, but with flagship flatscreens there is often no compromise. Supremely impressive — even with that work-in-progress Android OS

BRILLIANT BLU-RAY



High-end hitters: Opt for any of these TVs and you'll want to partner them with a quality Blu-ray player to make the most of their bigscreen talents. Certainly, you could wait for Ultra HD decks to launch, but if you need an image fix now, put these on your audition list.

Oppo BDP-105D: This is a player that, thanks to its full-size design and imperious build quality, grants real pride of ownership.

And so it should – it retails for £1,100.

The BDP-105D is overloaded with features, including an asynchronous USB DAC and in-built headphone amp alongside the Darbee Visual Presence processing and 4K upscaling.

Pioneer BDP-LX88: Another brute of a BD deck, this player harks back to earlier high-end disc-spinners from the brand such as the BDP-LX91. Priced around £1,200, Pioneer's flagship features a dizzying array of image tweaks and shows an audiophile side, too, with balanced XLR outputs catering for hi-fi enthusiasts.

Arcam UDP-411: The lack of DVD-Audio support robs this player of 'universal' status, but you probably won't care. Arcam's audio heritage comes to the fore with the UDP-411's sumptuous analogue and digital music playback, while upscaling (both of BD and DVD) is handled with real panache. Yours for £1,200.

HCC VERDICT



LG 55EG960V

→£3,800 approx → www.lg.com/uk
HIGHS: Jaw-dropping, pixel-perfect contrast;
spectacular design; rich colours; decent price
LOWS: Some brightness uniformity issues;
occasional colour imprecisions; no UHD HDR
Blu-ray support



HCC Verdict



Samsung UE65JS9500

→ £5,800 approx → www.samsung.co.uk
HIGHS: Brightest LCD TV ever; HDR ready;
upgradable processing/connections; Tizen system
LOWS: Pricey for its size; curved screen won't
suit all; colours with non-HDR content look
slightly washed-out at high brightness



HCC VERDICT



Sony KD-75X9405C

→£7,300 approx → www.sony.co.uk
HIGHS: Peerless sound quality; beautiful,
super-sized 4K pictures; stable direct LED
system; HDR update promised
LOWS: It's huge; Android TV is currently a bit of
a mess; upscaling can be a bit over-enthusiastic



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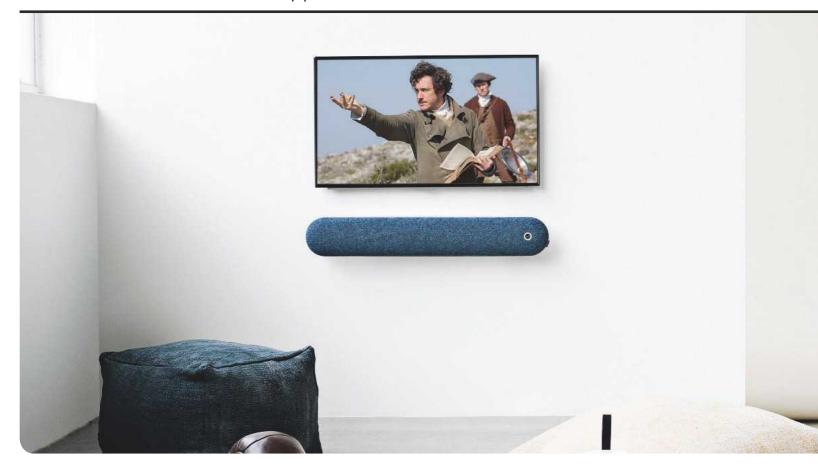
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Woolly mammoth

Libratone is back with another fabric-coated soundbar that has designs on **Adrian Justins'** living room. But can this app-controlled audio booster impress where it really matters?

AV Info

PRODUCT:Soundbar with style ambitions

POSITION: One of two Libratone 'bars (the other is the larger, pricier) Lounge

PEERS: DALI Kubik One; Monitor Audio ASB-2 IF YOU'RE IN the market for a soundbar you have a choice to make. You can accept a few sonic compromises and go for something slim and demure (and usually bargain-priced) or you can go for something with a bit more meat on it, something that's more likely to deliver the sonic goods by virtue of having much larger drive units. And the latter option also offers up the possibility of discarding the otherwise essential requirement of a separate subwoofer.

Libratone has already gained a foothold in this market in the guise of its Lounge, a humongous slab of a thing, albeit one that's stylishly dressed. Now the Danish manufacturer brings us the Diva, which is slightly smaller and a considerable £250 less expensive than the £900 Lounge, but happily not so different in terms of features.

In fact, the Diva soundbar has the same tweeters (two lin ribbon types) as the Lounge, with other drive units smaller

(a 5in woofer verses an 8in one and two 3in midranges against two 4in units). Its claimed power output is higher, though – some 225W compared with the Lounge's 150W. This bodes well because the Lounge is an accomplished performer, especially with music, and despite the lack of HDMI inputs or Dolby/DTS decoding it does a blisteringly good job with movie fare as well as regular daytime TV watching.

Styled to succeed

A significant part of the enjoyment of owning the Diva will come from its design. When you scale things up in terms of size (the Diva is almost a metre wide), looks become ever more critical. The good news is that compared with the staid designs of models from the likes of Arcam, Bose and Sonos, the softedged, wool-covered Diva is as foxy as Julia Roberts in *Pretty Woman*. And if you get bored with the standard grey fur coat you can always

embrace your inner Richard Gere and splash out an extra £70 for a new one. Libratone offers a dizzying choice of 14 colours, ranging from sedate blues to garish pinks.

Connectivity is a slight improvement on that of the Lounge. There's still no HDMI connectivity but you do now have a charge-only USB socket along with the 3.5mm line in and optical jack. Use the latter to connect to your TV. On the wireless front, Libratone has

'The soundfield feels expansive and nicely balanced. Even less nuanced TV fare is sonically satisfying'

also upped its game by adding Bluetooth (apt-X) with NFC pairing to AirPlay and DLNA (for Android devices and PCs) compatibility.

As before, you don't get a remote control. You are expected to use an iOS or Android app to operate your new toy. However, you can use the Diva's built-in IR learning feature, so that its volume can be altered via your TV's remote. This should be quicker and easier (when using the optical connection) than using the app, and significant since many smartphones and tablets aren't reserved exclusively for soundbar remote control duties whilst watching TV. One issue I had, however, is that my TV also received the IR command and put up an onscreen message saying the TV speakers weren't in use. A separate remote would be preferable, and frankly for the money you'd expect to have one.

Aggravating matters further is that the volume control disappears at times from the app (but I'd expect this to be fixed at some stage by Libratone).

All-holds barred

The Diva is supplied with a metal bar with supporting base that stops it from falling over on a tabletop. This stand can be inverted and used as a wall mount. Opt for this, though, and the position of the jack pack becomes less practical with a lack of space between the USB charge socket and wall. Cable management in general is a moderately tricky challenge.

There's a power/function button on the front of the bar, which gently pulses various

The bar is used for both wall and table mounting

colours according to its status. Two buttons are sited around the back for instigating an initial Bluetooth or network connection. Setting up requires the use of the aforementioned app and I found it straightforward enough. I soon had AirPlay up and running, for instance.

There's no onscreen (TV) display but the app allows DSP adjustment of voicing (nine modes) and some positional calibration options (selection for shelf-mounting, etc) delivered via the brand's long-running FullRoom DSP technology.

Bear essentials

Libratone's literature suggests its soundbar reaches down to 40Hz. This is hardly best-inclass, but (and despite the lack of any porting for its woofer) low-frequency performance is decent. The roar of the nasty bear and sounds of thunder during the storms in Pixar's *Brave* (Blu-ray) were meaty and resonant enough to stop me hankering too much for a separate subwoofer.

Dialogue, from the youthful Merida and her parents (Emma Thompson and Billy Connolly) is clear and has a lovely, rich texture to it. Individual effects, such as birds singing and doors slamming in the castle are nicely picked out in the mix, whilst gentler sounds such as the hooves of a distant horse are still discernible. It's a very likeable performance.

The soundfield feels expansive and nicely balanced, too. Watching less nuanced daytime TV is still a sonically satisfying experience, with the over-excited screams of Jonathan Pearce's football commentary, for example, blending well with the background of the murmuring, roaring and cheering of the crowd.

Musically, the Diva lives up to its name, delivering a clean, dynamic soundfield without colouration. The main theme from Jaws (a 24-bit/96kHz download streamed from iTunes on a Mac) is maybe a tad shrill at the highest frequencies but still has the power to scare when thrust into the room by the Diva's five-driver array. And the trumpets of Raiders of the Lost Ark are cleaner and more polished than Usain Bolt's trophy cabinet.

Overall, the Diva is as easy on the ear as it is on the eye (if not exactly easy on the wallet) and certainly worth an audition. It can sometimes prove annoying to operate thanks to its reliance on an app rather than a proper handset, and HDMI connectivity would be handy, but this is capable of a smooth stereo performance

SPECIFICATIONS

CONNECTIONS: 3.5mm analogue line in; optical digital; USB charge socket DOLBY TRUEHD/DTS-HD MA: No SEPARATE SUB: No REMOTE CONTROL: No (via app instead) DIMENSIONS: 988(w) x 158(h) x 100(d)mm WEIGHT: 5.5kg FEATURES: Wall-mountable (bracket included); controllable using Libratone App for iOS and Android; AirPlay, apt-X Bluetooth 4.0 and DLNA audio streaming; 40Hz-20kHz frequency range; IR learning function; FullRoom acoustic setting (Neutral, Floor, Wall, Shelf

positioning); nine DSP modes (Neutral, Easy Listening, Soft and Comfortable, Rock;

Jazz, Movie, Live Concert, Classical, Speech);

quiet mode; adjustable LED brightness;

changeable wool cover

DRIVE UNITS: 1 x 5in woofer; 2 x 3in ceramic midrange drivers; 2 x 1in ribbon tweeters

HCC Verdict



Libratone Diva

→ £650 approx → www.libratone.com **HIGHS:** Powerful, detailed sound; great with music; alluring design with numerous colour options

LOWS: No HDMI inputs; no Dolby Digital or DTS decoding; flaky app; no remote control; front-focused sound; limited bass depth







Thoroughbred Blu-ray performer

Someone should remind this over-achieving Pioneer Blu-ray player that it only sells for £500, chides **Steve May**

AV Info

PRODUCT:4K upscaling
Blu-ray player

POSITION:Below the flagship

BDP-LX88 spinner – and around half the price

PEERS: Oppo BDP-103D; Sony BDP-S7200 THE BDP-LX58 IS Pioneer's Blu-ray Prince Regent. By designation it ranks below the brand's flagship LX88 (and sells for half as much), but it doesn't doff its cap to anyone. It looks beautiful and is built like a hotel room safe. A 1mm-thick steel-plated bonnet keeps a lid on erroneous vibration, while the chassis features a 1.6mm-thick base, reinforced by a 3mm plate. In operation it's library quiet. You'll want to load discs simply for the pleasure of ejecting them again.

Got a new Ultra HD TV? The BDP-LX58 upscales 1080p to 2160p (keeping the frame rate of the original source), with 4:4:4 chroma upsampling. A dedicated texture processing algorithm, coupled to jaggy-beating edge processing, proves astonishingly convincing.

As Will Smith goes to visit his gran in *I, Robot* (Blu-ray) to show of his new Converse All Stars and score some sweet potato pie, the city is beautifully rendered. Freeze-frame Smith at the door and marvel at the tonality and fine detail of the building's brickwork and futuristic trapping. Given that all the visual FX would have been rendered at 2K resolution

anyway, it's difficult to imagine just how better a pukka 4K source could look.

There are two HDMI outputs; a main and a sub. This duality can be used in different ways. You can feed both a flatpanel and a projector with a mimicked feed, or you can route audio only through the secondary output. There's also a digital coaxial audio output (but no optical port), gold-plated analogue phonos and an Ethernet jack. Two USB ports are provided front and back.

There's also a Zero Signal Terminal which effectively uses your AVR to provide a Reference GND. Just run a phono lead from the player to a spare input on your receiver. The deck ships with a button-strewn backlit IR remote but will also work with the brand's iControl AV5 app.

Universal credit where it's due

The BDP-LX58 is Hi-Res Audio certified (which is to say it has a badge) and brandishes an ESS Sabre32 Ultra ES9011 192kHz/32-bit DAC beneath the hood. The Hi-Res Audio branding simply denotes that the player is capable of

The deck can also be driven by Pioneer's iControl AV5 app





92kHz/24-bit or above WAV/FLAC file playback. It'll play Super Audio CDs and DVD-Audio, too, should you have any. For further sonic refinement it offers PQLS, a low-jitter handshake for owners of compatible Pioneer AV receivers.

'Built to impress and with droolworthy AV performance... a match for decks costing a good deal more'

Don't network this deck thinking it's an online entertainment hub, though. You get YouTube and Picasa, and that's it. Pioneer has seemingly given up trying to compete with the mega brands when it comes to sourcing apps.

The deck is DLNA 1.5 certified and file compatibility is solid. The Pioneer, as advertised, unspooled DSD 2.8MHz and 24-bit FLAC files, along with MP3, WMA, AAC, WAV, APE, AIFF and ALAC. It'll also smooch with MKV, AVI, WMV and MP4 video. However, if you have a lot of music stored on a NAS expect to set aside some time to laboriously scroll through your album listings.

Multichannel audio is via digital output only

Speaking of time, this is not a machine built for speed. My Java-heavy BD copy of *Goldfinger* squanders 66 seconds to go from tray-in to menu, while a simpler concert disc takes 37 seconds to do the same. But the wait is worthwhile. Image quality is exceptional.

Pioneer will tell you this is down to a proprietary Precise Pixel Drive image processor with Picasso-like HD detail enhancer and triple noise reduction (NR), but you'll be too busy staring deep into its pictures to care. On the NR side, Component Frame Noise cleverly reduces the grainy Gaussian noise typically found in skyscapes, while Block Noise and Mosquito Noise reduction combat familiar MPEG errors. The result is gloriously cinematic.

When a barely-conscious Katniss is pulled from the disintegrating dome on my well-worn copy of *The Hunger Games: Catching Fire*Blu-ray, the screen is awash with fine detail.
Crisp embers float in the air, multi-hued flames lick around the debris and heavily-leaved trees bend and shake as metalwork falls through them. This picture has depth and vibrancy.

The player doesn't disappoint sonically, either. Multichannel is downright magnificent. As battleships collided in 300: Rise of an Empire I felt certain my living room would sink into the Aegean in sympathy. And the player has two-channel chops. Tori Amos' Trouble's Lament (FLAC, HD Tracks), presents the singer/songwriter centre-stage, insistent and tremulous, guitar work smooth as ice. The LX58 images with uncanny precision. Sonny Rollins' saxophone jazzes through St. Thomas (FLAC, HD Tracks) with tangible weight. Yes, the step-up BDP-LX88 sounds even better, but not by much.

On the debit side, I found current firmware disappointingly buggy. On audition the player locked up and became unresponsive several times when scouring YouTube and navigating my network and USBs. My only recourse was to power cycle. Hopefully this will be fixed with firmware updates.

Can I get a napkin, please?

Built to impress, with a droolworthy AV performance, Pioneer's BDP-LX58 is easily a match for high-end decks costing a good deal more. Even with UHD Blu-ray looming, I suspect many will find this drop-dead gorgeous player difficult to resist ■



On the menu



→ With nothing beyond YouTube and Picasa in the way of apps, Pioneer's user interface is a stripped-back affair, and shares the black, blue and grey livery of the brand's AVRs

SPECIFICATIONS

UPSCALING: Yes. To 2160p

HDMI: Yes. 2 x HDMI v2.0
COMPONENT: No
MULTICHANNEL ANALOGUE: No
DIGITAL AUDIO: Yes. Coaxial digital output
ETHERNET: Yes
BUILT IN WI-FI: No (via dongle only)
SACD/DVD-A: Yes/Yes
DOLBY TRUEHD/DTS-HD DECODING: Yes/Yes
DOLBY TRUEHD/DTS-HD BITSTREAM: Yes/Yes
DIMENSIONS: 435(w) x 118(h) x 338(d)mm
WEIGHT: 9.9kg
FEATURES: 2 x USB inputs; iOS/Android app
control; RS-232 control; Zero Signal Terminal;
DLNA media playback (DSD 2.8MHz, FLAC, MP3,

WMA, AAC, WAV, ape, AIFF, ALAC, MKV, AVI,

WMV, MP4); YouTube and Picasa clients;

POLS bitstream

MULTIREGION: No. Region B BD/R2 DVD

HCC Verdict

Pioneer BDP-LX58

→ £500 approx → www.pioneer.co.uk → Tel: 0208 836 3524 HIGHS: Fabulous image quality; heavyweight build; excellent audio performance LOWS: Poor network entertainment services; buggy firmware; slow loading times



The Secret Server

QNAP's vertical mini NAS offers maxi living room storage, HDMI hookup and plenty of media playing app support. Which is enough to get **Steve May** excited

THE QNAP TS-453MINI is not your typical SOHO NAS. For starters, it doesn't look grimly utilitarian. Instead we have a glossy black vertical design with a cute magnetic top cover. It sports an HDMI output, inviting you to plumb it into an AV system like any other source. It also overflows with media serving options. If you're after powerful Network Attached Storage that your connected TV will look up to, it's a compelling proposition.

Installation is straightforward. The lid pops off to reveal four HDD bays. These pull out easily and use a tool-less design; snap-on rails hold 3.5in drives in place. The system ships sans hard drives. For this audition I used Western Digital RED NAS HDDs, the recommended choice of QNAP HQ. Smaller 2.5in drives can be screwed in if required. All drives are hot-swappable.

The NAS is powered by a Quad Core Intel Celeron 2GHz processor, and sells in a 2GB (£380) or 8GB (£490) RAM configuration. Buy the former and you can upgrade the memory at a later date.

The TS-453mini is more than up to office work. If you're predisposed, you can run different Windows, Linux/UNIX and Android virtual machines (which is a bit amazing). It can even be used as part of a surveillance system, offering compatibility with a wide variety of IP cameras. But it's as an HDMI source that it piques our interest.

Like any NAS, you can sit the TS-453mini anywhere on your network, but it's handy to connect directly. Playback isn't subject to network congestion. That said, I streamed both

locally and across a LAN glitch-free.

During setup you'll need to download the HD Station app from the QTS dashboard in order for the HDMI output to function. This isn't clear in any documentation and had me foxed for a bit. Once initiated, this will also



download a suite of apps which can be driven via the simple remote: Spotify, YouTube, TuneIn Radio, Kodi (formerly XBMC) and an HD file player. The QTS operating system is icon-heavy and a bit oblique.

Popular content server Plex is another free download from QNAP's store. Access this via a device (Amazon Fire in my case) and your media immediately benefits from a slick UI. The mini also supports Chromecast and Apple AirPlay via the QAirplay app, and the sheer ease of use when it comes to setting up various media serving software is downright seductive. Kodi, Plex, Twonky...click, click, click, done. There's something wonderfully empowering about knowing you can pretty much play anything you have, wherever it is on your network.

In use, the TS-453mini proves extremely quiet. Canny heat management means this NAS could easily sit unnoticed in your room. Storage capacity shouldn't be an issue, either. For most music and movie fans, four 2TB drives running with RAID redundancy should more than suffice.

High-capacity NAS drives are often ugly, while style solutions skimp on storage space and versatility. This is a potent mix – a prograde NAS you'll actually want to live with ■

SPECIFICATIONS

HDD CAPACITY: Four-bay, and expandable via a QNAP Expansion Enclosure HDD COMPATIBILITY: 3.5in and 2.5in MEMORY SLOTS: Two, upgradable to 86B RAM CONNECTIONS: HDMI v1.2; 2 x USB 2.0; 3 x USB 3.0; 2 x Gigabit Ethernet DIMENSIONS: 210(h) x 151(w) x 200(d)mm WEIGHT: 2kg FEATURES: Intel HD graphics; Quad-Core Intel Celeron 2GHz CPU; QVPC; technology; AES 256-bit encryption; full suite of back-up and cloud services; camera surveillance apps; on-the-fly video transcoding; QNAP app store;

supports Chrome and Firefox browsers

HCC Verdict

QNAP TS-453mini



AV Info

PRODUCT: Living room four-bay NAS

POSITION: Baby brother of the TS-453Pro

PEERS: Synology DS115J; Western Digital My Cloud EX2

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SETC240WSF-ATR	2340 x 1320	92" x 52"	2935 x 155 x 170	16:9
SETC270WSF-ATR	2670 x 1500	105" x 59"	3245 x 155 x 170	16:9

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Bluesound brings hi-res compatibility to the whole-house audio scene. **Adrian Justins** auditions its debut hardware, from standalone speaker to disc-ripping streamer

AV Info

PRODUCT: Hi-res multiroom audio system

POSITION: The initial wave of products from Bluesound

PEERS: Sonos; AudioPro Living; Pure Jongo; HEOS by Denon NOT SO LONG ago Sonos was synonymous with multiroom audio but now it seems every major AV brand – including Samsung, LG, Sony and Panasonic – is jumping on the bandwagon. Canada-based Lenbrook (the company behind NAD and PSB) at least stands out from the rabble with its Bluesound range, which is a coalescence of multiroom, wireless streaming and hi-res audio.

It's not just hi-res support that marks Bluesound out, however. Its ecosystem is more versatile than many of its competitors in that it offers a range of products that can operate with or without your existing kit. Yes, it has the standalone Pulse speaker (£600, on test here) and the Duo 2.1 system (not reviewed), but if you want to simply stream to an AV receiver or amp then the £400 Bluesound Node, with its stereo phono outputs, is the best option. Or maybe you have a spare pair of speakers in another room without an amp, or want Bluesound's own combined streamer/amp, in which case the £600 Power Node, which offers 100W power (the amp stage sourced from NAD) and speaker terminals would

suffice. Finally, there is the Vault (£900), which can rip your CD collection to its 2TB hard disk as MP3, FLAC or WAV, allowing you to stream music wirelessly to any other Bluesound players. Or it can be hooked up by stereo phonos or optical cable to an external amplifier. There are plenty of options here.

Aiming high

Bluesound can stream FLAC, AAC, ALAC, WAV, AIFF, WMA, OGG and MP3 files at resolutions up to 24-bit/192kHz. Beyond basic volume adjustment/muting on the hardware, all operation – including setup – is done using either a smartphone (iOS, Android), Kindle or desktop app, the latter with options for Mac OSX and most Windows platforms. Call me old-fashioned [you are – Ed], but I do like a physical remote control for quickly muting a system when someone in my house comes in and demands that I 'turn that down!'.

Still, the app acts as the brains of the Bluesound system, and allows you to select content from your local network as well as streamed sources such as TuneIn radio,

Spotify, Qobuz and Tidal. As with all these things, the usability of the app can make or break the system, no matter how brilliant the hardware.

I tested a reasonably diverse multiroom setup in the guise of the standalone Pulse in my dining room, the Vault and the Node in my main room (with the latter hooked up to an Onkyo AVR and Q Acoustics speakers) and the Power Node installed in my conservatory, wired to a set of Roth OLi speakers.

From a design point of view the Bluesound kit is very chic, fashioned from durable white or black plastic with metal trim and nicely rounded edges that lend the squarer boxes an air of sophistication. The Pulse has a bit

'More versatile than many of its rivals – there's system flexibility here as well as hi-res support'

of a generic wireless speaker look to it (think Pure Jongo) from the front, but retains elements of the Bluesound aesthetic when viewed from above. Sockets on all products (including Ethernet for direct network connection) are recessed so that no ugly plugs protrude to spoil matters.

Installation takes a bit of time. Choose any one product and switch on. An LED light (part of the mute button) glows green to indicate the player is in Wi-Fi 'hotspot' mode. Find the hotspot on your device, launch a browser and enter a specified URL. A control panel appears that allows you to change parameters such as the speaker's name and audio settings (including gain, bass, treble, stereo pairing) but first you must hitch the player on to your network and download the control app. Both desktop and mobile versions operate by



launching the URL in a browser whenever you adjust the player's settings such as adding streaming services. With Spotify on my phone, after a bit of to-ing and fro-ing between BluOS app, browser and Spotify, eventually I got Spotify Connect working within the app.

After scratching around on Bluesound's website I sussed out how to access hi-res files on a MacBook Air, a process that required installing an extra utility and some convoluted messing around with sharing and permissions. This screwed up my Mac to such an extent that I had to re-install the computer's operating system... Still, before things went belly up I was navigating the desktop app, which allowed me to see all tracks ripped to the Vault and on my network, with artwork and labelled as CD or HD quality. Oddly, the artwork for every album was incorrectly displaced so that Beyonce's mugshot appeared when a classical piece by Britten played. The iOS app proved less disastrous and worked well.

With both apps, grouping and ungrouping players to create multiroom zones is simple, but I did get frustrated by not being able to simply play a track; instead you have to add it to a playlist first, then select the playlist if currently listening to another source such as Spotify or TuneIn. Streaming proved very stable, aside from dropouts with some 24-bit/192kHz ALAC files.

Sonically, Bluesound lives up to its billing. The Node and Powernode deliver a vibrant, transparent sound that sparkles like a Liberacé suit. The subtlety of the instrumental layers of Bryan Ferry's *Avonmore* (FLAC), especially amongst higher frequency instruments such as the sax and keyboards, are brilliantly revealed. The Pulse is also impressive, with power aplenty to fill a medium-sized room. Its bass output is a little overeager (peer through the grille and you can see a hulking woofer) but otherwise it serves up a broad, coherent soundfield that's commensurate with its price point.

Using the system's Smart Gain volume levels proves pleasingly consistent regardless of the file type and resolution, whilst any latency between the various speakers is imperceptible.

High-end niche

Bluesound's smart-looking and robust hardware is slightly let down by the app required to drive it, and the company ought to revise its installation and setup procedures and assume that not all customers are closet IT nerds. My MacBook Air issues aside, however, the Bluesound system is truly impressive, delivering an audiophile level of performance in a multiroom setup, both with hi-res sources and more bitrate-starved fare. With pricing beginning at £400 for the Pulse, Bluesound won't knock Sonos off top spot, but it should carve its own high-end niche

SPECIFICATIONS

PULSE

FILE FORMAT SUPPORT: MP3; AAC; WMA; OGG; FLAC; ALAC; WAV; AIFF (up to 24-bit/192kHz)

DIMENSIONS: 420(w) x 190(d) x 197(h)mm **WEIGHT:** 6.1kg

FEATURES: Supported Cloud services including Rdio, Qobuz, Spotify, Tidal; TuneIn internet radio; optical digital audio output; Ethernet; built-in Wi-Fi; 45Hz-20kHz frequency response; USB input; top-panel mute button; iOS/Android app control; 80W NAD DirectDigital amplifier

NODE

DIMENSIONS: 205(w) x 167(d) x 146(h)mm WEIGHT: 1kg FEATURES: Stereo analogue output; optical digital audio output; Ethernet; built-in Wi-Fi

POWER NODE

DIMENSIONS: 248(w) x 202(d) x 176(h)mm WEIGHT: 1.9kg FEATURES: Stereo speaker terminals; subwoofer output; 2 x 50W NAD DirectDigital amplifier; Ethernet; built-in Wi-Fi

VAULT DIMENSIONS: 293(w) x 239(d) x 208(h)mm

WEIGHT: 3kg FEATURES: 2TB internal hard disk drive; slot-loading CD drive for ripping to FLAC, MP3; stereo analogue output; optical digital audio output; Ethernet

HCC VERDICT



Bluesound Vault; Node; Powernode; Pulse

→ From £400 approx

→ www.bluesound.com

HIGHS: Dynamic, highly detailed sonics:

HIGHS: Dynamic, highly detailed sonics; top-notch design and build quality; plenty of system flexibility, including external hardware support

LOWS: Complicated networking setup; buggy app; not cheap



Solid slim-line spinner

Impressive 4K upscaling and 3D playback convinces Jamie Carter that this affordable Blu-ray player could find a place in a budget AV setup



UNDER FIRE FROM the likes of Netflix and an incoming Ultra HD format, the received wisdom is that the basic Blu-ray player is on borrowed time. The compact quality of the Panasonic DMP-BDT270 suggests otherwise.

Will the first generation of Ultra HD Blu-ray machines be as slender as the DMP-BDT270? Impossible, surely; at just 43mm high and 182mm deep, this deck is a painless addition to an AV rack, and brilliantly suited to clean on-wall installations and bedrooms alike. The only thing that potentially spoils an otherwise sleek appearance is a USB slot on the front of the body.

What the DMP-BDT270 lacks in millimetres it makes up for in pixels, upscaling all Blu-ray discs to 4K quality when hooked-up to a 4K telly. That's the headline act, but there's more to this deck than 3,840 x 2,160 resolution output. Okay, so 3D hasn't heralded the home cinema revolution the industry had hoped for, but it's reassuring that the DMP-BDT270 also supports native 3D Blu-ray discs.

While Panasonic's latest TVs embrace the Firefox OS, the DMP-BDT270 makes do with an ageing, rudimentary user interface. That's not a huge criticism; its colourful, grid-like VieraCast app platform is easy enough to operate, and does at least contain core apps. Netflix is joined by Amazon Instant Video,

YouTube, Skype

and the BBC's trio

little else of note.

occasionally slow

DMP-BDT270 isn't

anvone. The Home

page contains simple,

large icons for Video.

Music, Photos and

going to confuse

Although

to navigate, the

of iPlayer, Sport and

News, though there's

AV Info

PRODUCT:

Compact Smart Blu-ray player with 4K upscaling

POSITION:

Mid-range in Panasonic's lineup

PEERS:

Samsung BD-J7500; Sony BDP-S5500

Network (the latter meaning 'apps'), but since they're matched to the directional keypad on the remote, putting the DMP-BDT270 into different modes is one-touch stuff. If you think it's too plain, it's easy enough to set any photograph as wallpaper.

The slickness of space

All thoughts of primitivity cease when the DMP-BDT270 spins Gravity on 2D Blu-ray. On a 65in 4K panel, the onboard upscaling proves exemplary; there's no sign of jagged edges whatsoever, while the opening sequence sees the Space Shuttle Explorer emerge from the inky black of space with bags of detail amid strong contrast and colour. It's only when the debris hits that there's some softness to the fast motion. Aside from a slightly more stable image and a tad more refined detail, there's little to choose between Gravity from Blu-ray and Marco Polo streamed from Netflix 4K.

The great work continues with the film's 3D version, which looks less detailed, but is so stable that an intense realism is the result. 3D photos look great, too. That's where the DMP-BDT270 peaks; American Sniper on DVD and a plethora of digital video files appear soft and exposed when watched on a 4K screen, though remain surprisingly clean. Sadly, native 4K video files in the MP4 and TS formats aren't supported, which threatens the DMP-BDT270's status as a 4K machine. Not so the key surround sound formats, which are not only handled, but dealt with just as precisely as pictures, with expansive, crisp, clear audio even at low volumes.

The 4K upscaling offered by the DMP-BDT270 can be nothing more than a stop-gap - this compact deck could likely be kicked upstairs next year in favour of an Ultra HD version. Still, it has enough about it to do the job until then ■

SPECIFICATIONS

UPSCALING: Yes. To 4K MULTI-REGION: No. Region 2 DVD, Region B BD HDMI: Yes. 1x output COMPONENT: No MULTICHANNEL ANALOGUE: No **DIGITAL AUDIO:** Yes. 1 x optical output ETHERNET: Yes BUILT IN WI-FI: Yes SACD/DVD-A: No/No DOLBY TRUEHD/DTS-HD DECODING: Yes/Yes DOLBY TRUEHD/DTS-HD BITSTREAM: Yes/Yes **DIMENSIONS:** 415(w) x 43(h) x 182(d)mm FEATURES: 2D-3D conversion; Miracast

USB 2.0 port; external HDD playback; DLNA media playback (Xvid, MKV, MP4, MPEG-2, FLAC, WAV, WMA, AAC, MP3, ALAC, DSD, JPEG, MPO); BD-Live; VieraCast

HCC Verdict

Panasonic DMP-BDT270

→ £110 approx → www.panasonic.co.uk → Tel: 0344 844 3899 HIGHS: 4K upscaling from Blu-ray; excellent 3D performance; Netflix and Amazon Instant apps LOWS: Dated user interface; no support for 4K digital files; tawdry operation



Sony SRS-X88

This wireless speaker impresses Adrian Justins with its polished performance

WITH BLUETOOTH, AIRPLAY,

DLNA, USB-A, USB-B and 3.5mm analogue options — plus its SongPal app at your disposal — Sony has covered nearly all the bases in terms of connectivity with the SRS-X88. It's a standalone wireless speaker carrying the company's Hi-Res Audio branding and able to form part of a Sony multiroom setup. Party time! It's just a shame you can't form a stereo pair with a second unit.

The SRS-X88 packs seven drivers into its boxy but manageable (359mm-wide) frame: twin 40mm Magnetic Fluid midrange units, twin gold-rimmed soft dome tweeters, a centrally-mounted 2.5in woofer and a pair of passive bass radiators. It sits below the flagship SRS-X99 in Sony's speaker range.

The onboard 90W S-Master amplifier helps this desktop diva deliver a soundfield that's incredibly well polished with excellent detail and a truly remarkable bass

name d unit.

o its

presentation – the latter is taut with just the for easy of

presentation – the latter is taut with just the right extension, so that the bass guitar in Michael Jackson's *Thriller* underpins the track magnificently. Meanwhile, Pete Alderton's vocals in *Soul Of A Man* are raspy and textured while the guitar work is light and subtle. The mid-range can sometimes feel a little distant in the mix and the soundfield starts to lose precision if you crank up the volume but overall the SRS-X88

The SRS-X88 supports Google Cast connectivity

is a real pleasure to listen to.

The speaker will handle most standard and hi-res files up to 192kHz, including FLAC, ALAC, AIFF and even DSD, though not always over a wireless connection. The app is a useful conduit to all your sources but not flawless. The good news

is that there's also a physical remote for easy operation.

All told, a great addition to Sony's range ■



eu.audio-technica.com → £200 approx

Audio Technica ATH-MSR7

Ed Selley gives his ears a massage with these softly-does-it headphones

IF YOU FIND that your main gripe with headphone listening is comfort, the Audio Technica ATH-MSR7s could be the answer to your prayers. Designed with comfort in mind, these mid-priced cans use a deep memory foam padding to provide a comfortable fit.

The housings mount a pair of slightly larger than average 45mm drivers, dubbed 'True Motion' and claiming a response of 5Hz-40kHz. These are placed in an enclosure that is sealed apart from a small and apparently noiseless vent. The end result is not the most beautiful pair of headphones on the market, but they are well built and manage to deliver on the promise of high comfort levels, with excellent

Memory foam earpads and a padded headband provide listening comfort

pressure on the side of your noggin and envelopment of your ears.

Audio Technica supplies a choice of cables, with and without mic and remote, for home and portable use. One is 3m long, which I found sufficient for AVR hookup.

Clarity capers

With a spirited rendition of Kingsman: The Secret Service, the ATH-MSR7s show off the Audio Technica house sound with an accurate, refined presentation. The film's controversial fight scene in the church is portrayed with clarity and a real sense of effects happening all around you. There's plenty of fine detail dug out, and the MSR7s also show very little sign of strain with volume levels right up — something that shouldn't be too hard to achieve as the design is usefully sensitive (100dB).

Compared to rivals like Sennheiser's Momentum and Focal's Spirit One S, the Audio Technica does lack a last edge of excitement. The tradeoff is a forgiving presentation with poorer materials that makes this a decent — and very comfortable — all rounder. Considering the price, these are easy to recommend ■









Just a few of our recent accolades



Best Home Cinema Over £100k **Highly Commended** 2013 Best Home Cinema £40k-100k **Highly Commended** 2015

Best Home Cinema under £40,000 Winner 2011, 2015

Control

Best Home Cinema Winner 2014

Most Professional AV Rack Winner 2014

Dealer of the Year **Winner** 2014

Best Lighting Project Winner 2015



Best Home Cinema Winner 2015









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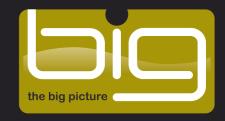
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ACOUSTIC AKER SET WORTH £1,200

THIS ISSUE, THANKS to the generous people at UK speaker marque Acoustic Energy, we're giving away a floorstanding 5.1 speaker system that's certain to bring power and poise to your cinema room's sonics. And to win it, all you have to do is answer our brain-teaser!

The speaker package in question comes from

Acoustic Energy's new 1-Series, and features the 103 floorstanders for front left/right duties, the 101 standmounts for the surround channels, the 107 centre speaker and the 108 subwoofer. All these models are available separately – here they combine to form a multichannel set worth approximately £1,200.

The 1-Series showcases Acoustic Energy's talents when it comes to design, build and performance. All the passive speakers are built around the same combination of a lin soft dome tweeter and 4.5in anodised aluminium mid/bass driver (both the 103 and 107 feature two of the latter), ensuring even tonality and seamless pans across the soundfield. Meanwhile, the braced,

pressure-loaded MDF cabinets feature a front-mounted slot port that allows them to be placed close to a wall if needed while improving bass response.

The neatly compact subwoofer employs an 8in driver and 150W Class A/B amplifier to deliver tight, smooth low-frequency impact. A remote control makes it easy

to tweak its output from your sofa.



We reviewed the Acoustic Energy 1-Series 5.1 system in HCC #246, where it earned 'Recommended' status. Feed this array a movie soundtrack or your music collection and you're rewarded with a refined, detailed and dynamic performance with incredible integration. Those soft dome tweeters attack effects with relish, and the dedicated centre speaker projects dialogue with real authority. Add in the eyecatching angled-baffle design of the 101 floorstanders and you have a system that's bound to bring a smile to your face. Enter now to be in with a chance of winning!



Front ports make the 1-Series speakers easy to place in your room



Be in with a chance of winning the Acoustic Energy 1-Series 5.1 package by answering the following film-related question:

Q: The DeLorean time machine in *Back to the Future* is powered by...

- A) Solar energy
- **B)** Nuclear energy
- C) Tidal energy

HOW TO ENTER:

Simply email your answer (either A, B or C) to **competitions@homecinemachoice.com** with the subject line 'Acoustic'. You must include your name, address and contact telephone number.

The closing date for this competition is September 4, 2015. Please read the terms and conditions (below) before sending in your entry.

Competition rules

1. The first entry drawn at random will win the prize. 2. Only one entry per person/household; multiple entries will be discarded. 3. Entrants from the UK only. 4. Employees of MyTimeMedia Ltd and companies supplying competition prizes are not eligible to enter this competition. 5. Please ensure your personal details are correct, as they will be used to contact you if you win. 6. No alternatives, cash or otherwise, will be offered to the winner as prizes. 7 The editor's decision is final. 8. Comp winner's info available upon request. 9. The closing date for entries is September 4, 2015.



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Revolution XT lives up to its name, marking a major leap forward in loudspeaker design and the realisation of some of Tannoy's most radical and forward thinking technologies.

Retaining the classic trapezoid shape from its multi award-winning predecessor, the new Revolution XT cabinets now feature an ingenious reflex-coupled dual-cavity design. This optimises performance of the all-new Omnimagnet™ Dual Concentric™ driver across extremely low to mid-bass frequencies. The complex internal design is further perfected with an integrated plinth that provides a uniform and predictable low frequency interface to the listening environment, delivering the deepest bass notes with ease.

Dynamic, engaging and articulate, yet incredibly easy to set-up and place in any room, Tannoy's Revolution XT is a true revolution in sound. Find out more at tannoy.com.







DIGITAL COPY

Loudspeakers are the stalwarts of any movie room believes **Mark Craven** – so he's not bothered that they're basically the same now as they were twenty years ago

'THE PROBLEM WITH relying on nostalgia is that people only remember the good things.' So said the great philosopher – and cricket commentator – Richie Benaud. Without being too harsh on Richie, isn't that the point? No one wants to sit around reminiscing about the bad old days.

This issue is *HCC*'s 250th, and this year also marks our 20th birthday. With that in mind, we put on our nostalgia spex (anaglyph ones, obviously) and spent hours poring over back issues to compile two special features – one about movies, one about hardware. And, yes, we wanted to remember the good things. We could have opted for 'Home cinema's most pointless innovations' or 'Movies that sucked,' but, firstly, that would probably have resulted in even more arguments, and, secondly, there are only so many times you can point and laugh at BD-Live or Tim Burton's *Planet of the Apes* remake before needing a lie down.

Our look at home cinema's greatest innovations proved particularly interesting to put together, because while there were obvious candidates in many areas of technology, loudspeakers seem under-represented beyond KEF's 'egg' sub/sat system. No doubt manufacturers of some of the finest speaker arrays we've auditioned in the past two decades will feel they have been short-changed here, but the point is that speaker technology, while constantly being improved, hasn't really undergone a major overhaul in, well... ages.

The essence of audio

At its most basic, a loudspeaker is a box with a transducer in it. Chuck in a voice coil, a magnet and maybe a crossover or two and you're in business. Where the R&D budgets of the world's speaker manufacturers go is on improving these key

elements. Thousands of man-hours are spent on experimenting with driver type and materials, the form and construction of enclosures, crossover designs — all with the intention of getting a better performance. Or, perhaps, a decent enough performance while hitting a certain price point or aesthetic style. Speakers are diverse beasts — whether you've got £100 or £10,000 to spend, there'll be an option for you.

Loudspeakers simply don't become obsolete or hopelessly old-fashioned.

And that's what I really love about them. Get a set that's built with a fair level of care and attention and it'll last for years. In our photo studio we have a pair of Cresta speakers from KEF (them again) that must date from the early 1970s and still sound great. Whereas I have a TV in my bedroom from 2011 that's starting to look awful.

This must make it a tricky business to be involved in on the manufacturing side. Engineers of games consoles, for instance, can guarantee themselves new sales by upping the processing power (and thus performance capability) of their gizmos. Speaker makers, on the other hand, are often reliant on owners *wanting* to upgrade, rather than feeling that they have to. The number of readers' setups that I see using speakers that are over a decade old is a case in point.

So consider this column an apology to every tweeter twiddler, cabinet crafter and bass driver boffin the world over. Everyone at *HCC* is eternally thankful for your efforts and don't take it personally that we've highlighted Wi-Fi as a key milestone in AV over your work. Speakers are the lifeblood of any home cinema setup. Don't go a-changin'

How long have you had your current speakers? Let us know: email letters@homecinemachoice.com Mark Craven still owns a pair of speakers that he remembers using when he had a full head of hair and his music collection was stored on cassette





FILM FANATIC

The successful return of two moribund movie franchises has left **Anton van Beek** wondering about others that deserve a shot at escaping the cinematic graveyard...

BLOCKBUSTER SEASON IS well and truly under way. And despite the odd complete and utter turkey (I'm looking at you, *Terminator: Genisys*), for my money it's been a decent year for blockbuster junkies. The likes of *Fast & Furious 7, Avengers: Age of Ultron, Mad Max: Fury Road, Jurassic World* and *Ant-Man* have packed more than enough thrills and popcorn-munching fun to ensure repeated plays when they hit Blu-ray.

A quick look at that list also reveals something interesting: two of the year's biggest and best movies – *Jurassic World* and *Mad Max: Fury Road* – are belated sequels in franchises that most people considered dead. Long dead, in fact – it's been 14 years since audiences last checked in on those genetically-modified dinosaurs and a whopping 30 years since two men entered and one man left the Thunderdome. Yet even with these huge delays, both are genuine sequels that build on their predecessors and continue their stories, rather than rebooting them.

This got me thinking. What other movie franchises that have lain dormant deserve to be reawakened? Here's four to start with...

Blade

Wesley Snipes is out of prison. Marvel is one of the biggest players in Hollywood. Put those two facts together and there's never been a better time to bring the vampire-slaying superhero back to the multiplex. Bring back Jessica Biel's Abigail Whistler (the saving grace of the otherwise disappointing Blade: Trinity), too.

The only question marks are whether Marvel has regained the film rights from previous holder New Line and if the Avengers studio would be happy to fold an 'R-rated' series into its shared cinematic

universe. But, as Snipes claims to have recently spoken to Marvel about the character, there's a chance this could really happen.

Indiana Jones

I know there have been rumours about a reboot with hot property Chris Pratt donning the Fedora. But surely Harrison Ford deserves one last crack of the whip? If only, perhaps, to ensure that ... Kingdom of the Crystal Skull isn't the cinematic swan song for his incarnation of Indy. And if script-writers can conjure up a horrible onscreen death for the archaeologist's son "Mutt" (Shia LaBeouf) to serve as motivation for him coming out of retirement, so much the better.

Hellboy

Following the disappointing box office takings of *Hellboy II: The Golden Army* in 2008, Guillermo del Toro's proposed trilogy of films based on Mike Mignola's comic book series came to an abrupt end. Several plot threads are subsequently dangling – including Hellboy's impending fatherhood and his destiny as the 'Beast of the Apocalypse'. With audiences hungrier than ever for superheroics, the time is right to boot up part three.

The Adventures of Buckaroo Banzai

There was only ever one Buckaroo Banzai film, but its unexplained world and characters made it feel like a later instalment in an ongoing series. Perhaps the new UK Blu-ray (see p103) could drum up interest. I'd love to finally get to see *Buckaroo Banzai Against the World Crime League*, the sequel promised during the first film's end credits ■

Which defunct movie franchises would you like to see continued? Let us know: email letters@homecinemachoice.com Anton van Beek still believes that Indiana Jones and the Kingdom of the Crystal Skull is a bigger insult to fans than those accursed Star Wars prequels





HOME CINEMA EVOLVED







Pure Theatre™ is a British company based in Shropshire, specialising in the design and manufacture of state of the art home cinema products, here in the United Kingdom.

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86 ADVICE



PICTURE THIS

Motion blur is limiting the resolution impact of your 4K or Full HD display, but **Vincent Teoh** explains the areas where LCD and OLED technologies are making strides to improve

SALES OF 4K TVs are taking off. Yet while every legitimate UHD TV features a native screen resolution of 3,840 x 2,160, few – if any – are capable of delivering true 4K in real-world video content. The reason is motion blur, which degrades onscreen detail once the image starts moving.

For ages, blurring was thought to be determined by the display's pixel response rate, or how fast a pixel can change colours. However, as we gain more understanding about how our eyes and brain work, it's become clear that retinal persistence plays an important role in our perception of motion blur.

A TV can broadly be categorised as either a hold-type or impulse-type display depending on how the panel is driven. On hold-type displays such as LCD (including LED-lit) and OLED, a frame is displayed continuously until it's replaced by the next one. The persistence of the preceding static frame in our retina as our eyes track the movement on screen is the chief culprit of what we experience as motion blur. This is known as the sample-and-hold effect.

Examples of impulse-type TVs include CRTs and plasmas. These can produce much sharper motion than LED LCDs and OLEDs. What happens is that the phosphor decaying process introduces a fade-to-black interval which gets rid of any prolonged frame persistence. This 'refreshes' our retina, resulting in the perception of clearer motion.

Plasma and CRT televisions are no longer with us – LCD and OLED TVs are all that remain. Yet over time TV makers have developed a number of tricks to combat motion blur on hold-type displays.

The most straightforward method is to insert an artificial frame between the original frames, thus shortening the amount of time each frame is displayed and held to our retina. Commonly known as motion-compensated frame interpolation (MCFI), it is highly effective in reducing motion blur, but introduces at least two side effects.

The first is the soap opera effect which causes 24p movies to look like hyper-smooth video. While some advocate a move towards higher frame rates for film, **I'm a fan of the dreamy, surreal, cinematic quality granted by 24fps** for historical and aesthetic reasons, and would rather switch the telly off than watch a film that has had its very fabric subverted. Fortunately, some brands like Samsung and LG offer separate controls for interpolating low- and high-grade motion, allowing users to enhance motion definition without causing soap opera effect.

Perhaps more unavoidable is the appearance of interpolation artefacts following the injection of frames, which may manifest as halos, shimmering, tearing or other forms of aberration, especially around objects moving across a complex backdrop. In general, the more aggressive the interpolation, the more artefacts appear. Setting your TV's MCFI control (if present) to its lowest setting (one notch above 'Off') is usually enough to boost motion resolution without introducing significant artefacts.

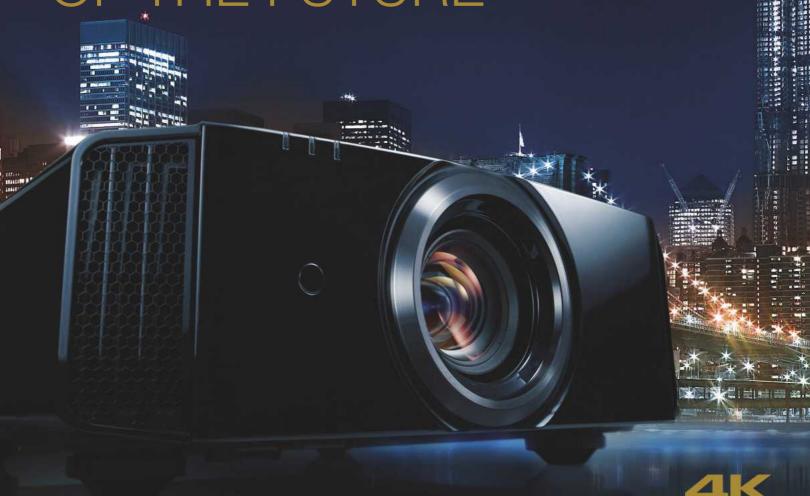
The most promising current tech to improve motion clarity on hold-type displays is black frame insertion, which adds a black frame between original frames, seeking to emulate the low-persistence properties of impulse-type displays. Because of how the technology works, flicker and screen darkening inevitably ensue, but if you can tolerate the former and compensate for the latter on a sufficiently bright panel, then you'll be rewarded with motion sharpness without having to endure soap opera effect or interpolation artefacts

Do you have your display's frame interpolation on or off? Email letters@homecinemachoice.com Vincent Teoh
has worked as
a professional
video calibrator for
seven years.
His current
favourite song is
Blurred Lines by
Robin Thicke...





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^{*} The 2014 range of JVC D-ILA Projectors consists of model numbers DLA-X900R, DLA-X700R, DLA-X500R. Visit www.jvc.co.uk for more details. ** Contrast ratio specifications are for the DLA-X900R. 3840x2160 (4K e-shift3 - not native 4K).







Feedback

Got an axe to grind? Need to comment on current technology? Want to share your knowledge with our readers? **HCC** is here to help

DVD at 4K - tell us more!

I am looking forward to buying a 4K projector in the next year when there is a greater choice and hopefully DLP types. However, your reviews do not seem to say what standard-definition looks like on UHD screens. I have managed to replace about two thirds of my DVDs with Blu-rays, but expect that many of my favourite films will never be released on Blu-ray and I will therefore have to watch upscaled versions. Will upscaling them to 4K make them worse to look at?

Also, regarding your article ... Spies Uncovered (HCC #248), the American import of Notorious is not region coded. It plays fine on my Region B player. In fact, many American Blu-rays which are supposed to be coded are not. You just have to be prepared to send them back if they turn out to be locked! David Simpson, via email

Mark Craven replies: Apologies if we're not giving due attention to the image quality of DVD viewed on 4K displays – obviously, we often focus on Blu-ray, and native 4K where available!

So will upscaling DVDs to 4K make them 'worse to look at?' Well, there are many factors to consider here, including the size of your display and your viewing distance and, of course, the

efficiency of your upscaling hardware. Upscaling DVD to 4K is no different in principle to the upscaling to Full HD that I assume you're already doing in your system – only there's a lot more work for your silicon to do and a lot more pixels to think about. Upscaling artefacts such as jaggies and halos will still occur and may be more apparent. Alternatively, attempts by your hardware to counter these may result in a soft-looking image. Furthermore, your enjoyment will depend on the quality of your original standard-def source. Personally speaking, I find SD football from BT Sport

unwatchable on my 65in 4K Samsung TV, DVDs less so.

That's the short answer. You've spurred us on to have a better look at this in a forthcoming issue.

Trailers give away too much

I'm the owner of a JVC DLA-HD750 projector, Oppo Blu-ray player, Bel Canto PRePro processor, Integra 7.1 power amplifier and Revel speaker system, so the only time I go to the cinema nowadays is to watch IMAX 3D movies at the Printworks in Manchester.

Bearing this in mind, *Jurassic World* is exactly the kind of movie where IMAX 3D could be

★ STAR LETTER...

Tech and equipment is for watching films – don't forget it!

The last issue (*HCC* #249) so perfectly captures my thoughts about AV it's spooky. Let me explain.

First we have the excitement about 4K, HDR, Atmos, DTS:X and all the other new things which are just coming into reach. I can't have been the only one who read Mark Craven's review of the Pioneer VSX-930 while mentally cutting holes in my ceiling. Next we have Martin Dew's interview with Joe Kane, who wants to push things even further, and Steve May who'll buy it as soon as it's out.

But why are we so excited? Because we, like Mike Smith ('Readers Room') remember the awesome sound of Laserdisc (I still have my CLD-925 and, like Steve May, a stack of discs for it I'll never sell or watch), or the stunning clarity of DVD (I had a Samsung DVD-907 just like Anton van Beek!) and we want to be wowed again, just like the people who got to see Cinerama in all its glory.

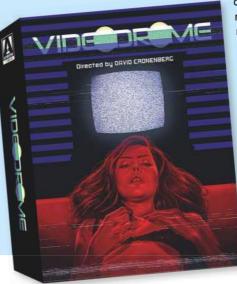
Through all of this, though, we should remember what all this technology and equipment is for. Watching films. Films like *Goodfellas* ('Playback'). I'd rather watch that on the shonky DVD-based system I had 15 years ago than *The Interview* on my current setup.

I think last word should go to Mark.
I took his advice and watched *Jurassic Park* with some friends. There was popcorn, there was beer, there were jokes about Jeff Goldblum's hair. After a few minutes I don't think any one of us cared that it was in only 8-bit colour. Now then,

when's Kingsman out? I reckon that's up next! Daniel, via email

Mark Craven replies: We're glad to have been of service, Daniel, and thanks for your letter.

I like your point about watching good movies on



bad gear being preferable to watching bad movies on good gear. This is plainly obvious, but, on the other hand, there's still something to be said about the thrills offered by even a bad movie that looks and sounds astonishing on a system. Jupiter Ascending (reviewed this issue on p96) is a case in point — the movie is an overblown, bloated mess but it certainly impresses in AV terms.

Star letter-writer Daniel wins a copy of Arrow Video's Videodrome: Limited Edition. Boasting a restored hi-def version of David Cronenberg's 1983 sci-fi-horror classic alongside a plethora of bonus goodies (including four of his early shorts) the dual-format Videodrome: Limited Edition is available to buy from August 10.



expected to surpass even the most sophisticated home theatre, so I duly booked 'Premier' seats dead centre of the screen, for myself and a film buff friend.

Now, at one time an advertised 6pm start time at the IMAX really did mean a 6pm start; any trailers came before. This time, however, we were seated for 6pm and were subjected to 25 minutes of trailers and adverts. First off we had the trailer for Ant-Man, followed by adverts, then the trailer for Terminator Genisys. These were both films I had every intention of watching, probably at the Printworks. But not now.

After viewing both trailers, I feel like I've already seen condensed versions of these movies, with important plot twists revealed and the plots laid out in such a way that I could probably write a review of them.

Remember when trailers were referred to as 'teasers'? Akin to showing a bit of thigh, so to speak? Trailers nowadays go full-frontal on the first date, leaving nothing to the imagination.

My friend also agreed that the trailers had disclosed too much plotting, and a girl behind me stated 'I feel like I've just watched the film!' after the Ant-Man trailer.

This isn't the first time this issue has been raised in *HCC*, but it needs to be hammered home again: trailers should be teasers and shouldn't be off-putting. *Chris Redmond, Lancs.*

Anton van Beek replies:
There's a bit of chatter in the film industry about trailers at the moment, particularly the one for *Terminator Genisys*. As you allude to, one of the movie's plot twists is actually signalled in the trailer, and even the director Alan Taylor has been critical of the way the movie was marketed.

I agree that trailers that tease rather than reveal are preferable. The Star Wars: The Force Awakens teasers have been great at building excitement about the movie without giving anything away about the actual plot.

But with studios now aiming for box office figures in excess of \$1bn, aggressively marketing their movies is becoming more and more important. And sometimes they will get it wrong.

Want Cinerama? Go here...

Your recent excellent article on Cinerama may have whetted readers' appetites to witness a full cinema presentation of the system. This is not as impossible as it seems, as at present there are to my knowledge three public cinemas worldwide presenting
Cinerama and associated systems
such as Todd-AO. These are
located in Seattle, Hollywood
and Bradford. The Bradford venue
may come as a surprise to readers
– it's located at the Picturehouse
Cinema within the National
Media Museum.

This Bradford-based cinema is holding a Widescreen Weekend from 15 to 18 October and will be screening films such as How the West Was Won, The Best of Cinerama and Oklahoma (in Todd-AO format) in their Cinerama screen. Full details can be found on the National Media Museum's website (www. nationalmediamuseum.org.uk). It also screens occasional Cinerama presentations as part of the normal film schedule. Keith Arnold, via email

I saw Cinerama!

I first saw Cinerama at the Casino Cinerama Cinema in London, which is now the Prince Edward theatre. I sat in the middle of the front row of the first circle, and the film was *Ice Station Zebra*. The cinema was full and the experience was amazing — I have never forgotten it.

The next time I saw Cinerama was at the Odeon Merrion Centre in Leeds, which at the time was new and I think it was the last

single-screen cinema that Odeon built. I think it is still there but not used. I wish those days were back when going to the cinema was a proper night out with usherettes, intervals, and curtains opening to reveal wonder. That was what cinema was all about! Stuart, via email

So did I!

When Cinerama was first shown in London (in Old Compton Street, Soho) I went three times. I still have the original programme, and was fortunate enough to be shown around the projectors, etc.

I have the Smilebox BD and have shown it in my home cinema (projector, large screen with curtains). It does still give the same excitement as it did all those years ago. Unfortunately, having moved, the home cinema does not exist now, but I still get HCC as one day it will be built again!

Ray, via email

CONTACT US...

Write to HCC, AV Tech Media Ltd, Enterprise House, Enterprise Way, Edenbridge, Kent, TN8 6HF, or email us at letters@homecinemachoice.

Please note: we cannot guarantee to print/answer all the letters we receive. Sorry.

Mark Craven replies: Thanks Keith, Stuart and Ray for your Cinerama input – it's great to hear from people who experienced this widescreen originator first-hand.

And I will certainly be making a beeline for Bradford's National Media Museum later this year. A Widescreen Weekend? Sounds like my cup of tea.

Towers of strength needed

I recently purchased your mag as I am needing help in choosing a home cinema system. I have always been drawn towards the Sony range of all-in-one systems – specifically the BDV-N9100W, but have put off purchasing for various reasons. Sony no longer stock this and I believe it was hard to find in the UK anyway.

The Samsung HT-J7750W reviewed in HCC #248 looks nice but I have been put off by the build quality comments made in your magazine's review, as I have young children at home. I need something sturdy and strong.



My budget is about £700 but I can go higher for the right system with the following features: wireless rear speakers; Blu-ray playback; minimum of two HDMI inputs; media streaming from phone, laptop, tablet; Wi-Fi built-in; and access to a NAS which I intend to get to store digital music and videos. Preferably it would feature tallboy front and rear speakers as I have no shelves to mount on and don't fancy drilling brackets, etc.

You may suggest not getting an all-in-one – I am open to suggestions. My front room isn't big and I don't want to have to buy a hi-fi cabinet to store a separates system – it needs to fit on my TV stand which already houses my Sky box and consoles. Chris Smith, via email

Mark Craven replies: Your criteria and budget certainly makes us think an all-in-one system is the way to go. You could opt for separates, but getting wireless rears would be a problem.

Another problem is your desire for tallboy speakers and something that is 'sturdy and strong'. These are two things that don't tend to go hand in hand in the one-box world, from my experience! I would have suggested opting for the Samsung HT-J7500W (pictured), which is the essentially the bookshelf version of the HT-J7750W, but you say you have no place to mount the speakers.

One thing, though: while the Samsung tallboys (once assembled from their trio of parts) do wobble on their base-plates, they aren't likely to fall over. Nor are they heavy enough to crush someone if they did...

Win! Three great Blu-rays up for grabs

Just email your answer to Competitions@homecinemachoice.com to be in with a chance



The Divergent Series: Insurgent

The sequel to the hit 2014
'Young Adult' sci-fi-action
film *Divergent* is available
to buy on Blu-ray and DVD
from August 3, courtesy of
Entertainment One. To celebrate

we have five copies of *The Divergent Series: Insurgent* on Blu-ray to give away.

Question:

Which of the following is *not* one of the five factions in *Divergent*'s version of Chicago?

Answer:

A) Abnegation B) Dauntless

C) Hufflepuff

Email your answer with **'Insurgent'** as the subject heading – and include your postal address!



The Saboteurs

This tense and breathtaking six-part World War II TV series arrives on Blu-ray and DVD on August 10 following a successful run on More4 in the UK. And thanks to Arrow Films

we've got five copies of *The Saboteurs* on Blu-ray up for grabs.

Question:

The Saboteurs actress Anna Friel shot to fame in which British soap opera?

Answer:

A) Brookside B) Coronation Street

C) Eldorado

Email your answer with **'Saboteurs'** as the subject heading – and include your postal address!



Run All Night

Liam Neeson must keep his estranged son safe from the mob in this tense action-thriller. *Run All Night* is available to own on Blu-ray and DVD from August 10

courtesy of Warner Bros. Home Entertainment, and we've got five copies of

Ouestion:

the Blu-ray to give away.

Liam Neeson starred in a 2012 blockbuster based on which popular boardgame?

Answer:

A) Monopoly B) Snakes and Ladders

C) Battleship

Email your answer with 'Run All Night' as the subject heading – and include your postal address!

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PLAYBACK

→ SOFTWARE HIGHLIGHTS JUPITER ASCENDING 3D The Wachowskis deliver an AV tour de force with their space-age take on Cinderella FOCUS The con is on with this enjoyable hi-def caper VIDEODROME David Cronenberg's sci-fi-horror masterpiece is reborn on BD THE GUNMAN Is Sean Penn the new Liam Neeson? THUNDERBIRDS Classic puppet movies are go on Blu-ray AND MUCH MORE!





Short Circuit gets a gangsta makeover in Neill Blomkamp's latest big-budget sci-fi

→ CHAPPIE

Short Circuit crashes headlong into RoboCop in Neill (District 9) Blomkamp's latest sci-fi thriller. In a near future version of Johannesburg where state-of-theart robots are used to police the streets, rogue police 'bot Chappie is given true artificial intelligence by his creator (Dev Patel), only to end up being raised on the streets by a group of gangsters.

Given a pretty rough ride by critics when it hit cinemas, *Chappie* may not be particularly original and once again finds Blomkamp falling some way short of the promise he showed in his debut feature. However, judged on its own terms it is a lively and entertaining piece of sci-fi sprinkled liberally with colourful characters (especially the Sharlto Copely-voiced-and-mo-capped title character), high-concept themes and thrilling action set-pieces. *Picture:* The latest in Sony's line of 'Mastered in 4K' Blu-rays, *Chappie* presents viewers with a stunning 2.40:1-framed AVC Full HD encode.

Visually, the film itself follows the same aesthetic approach we've seen across Blomkamp's films; filling the screen with intricate textures and a slightly muted palette with golden accents and occasional hits of deep colour saturation. Blacks are deep and inky, revealing plenty of shadow detail, while contrast pushes whites fairly hot without sacrificing fine textures. Simply excellent.

Audio: The film's DTS-HD Master Audio 7.1 mix certainly delivers the goods with its excellent dynamic range and expansive soundfield. Surround





HCC VERDICT

Chappie

→ Sony Pictures → All-region BD

→ £25 approx

WE SAY: Stunning picture and sound
plus a great set of extras make this
sci-fi flick well worth a look



speakers are constantly engaged for discrete ambient effects and to kick things up a gear or two during the bullet-riddled final showdown between Chappie and the MOOSE (Chapter 14). Meanwhile, the subwoofer provides plenty of support thanks to the throbbing, potent bass present throughout.

The lossless presentation also works wonders with Hans Zimmer's pulsating score; a feast of electronica that veers from *Blade Runner*-era Vangelis to 1980s retro videogames.

Extras: Chappie's supplementary features kick off with an alternate ending (five minutes) and an extended scene (two minutes).

Next up comes the real meat of the package, a collection of nine featurettes – From Tetra Vaal to Chappie; Jozi: Real City and a Sci-Fi Setting; Chappie: The Streetwise Professor; We Are Tetravaal; Keep it Gangster; Rogue Robot: Deconstructing the Stunts and Special Effects; Arms Race: The Weapons and Robots; Bringing Chappie to Life: The Visual Effects; and The Reality of Robotics. Running a little over 79 minutes in total they explore various aspects of the film, from its origins as Blomkamp's 2004 short Tetra Vaal to the astonishing visual effects used to bring the title character to life.

The Art of Chappie is an extensive collection of production art split into seven categories — Chappie; MOOSE; Yobot; Production Design; Storyboards; Director's Sketches; and Poster Art.

An additional hi-def platter is used to house an additional 27-minute scene deconstruction featurette, which feels a little wasteful in our opinion.

Taken 3: Extended Harder Cut

Twentieth Century Fox → All-region BD £25 approx



Ditching the familiar kidnapping concept, this final film in the trilogy finds Bryan Mills (Liam Neeson) on the

run after being implicated in the murder of his ex-wife. Sadly, any promise shown by this new approach is scuppered by the decision to shoot and edit everything from buying a bagel to a car chase in the same hyperkinetic style. It's an exhausting approach that robs the narrative of pace and the action scenes of any impact. This UK Blu-ray boasts two cuts of the film, good AV performance and a typically dismal selection of extra features.



The Salvation

Warner Bros. Home Entertainment All-region BD → £23 approx



This riveting Western stars Mads Mikkelsen (TV's Hannibal Lecter) as a Danish settler who guns down the outlaw

who killed his wife and child, only to end up being hunted down by the man's sadistic brother. An archetypal tale of revenge and redemption, *The Salvation* may not do much that is new, but does it all so well that it really doesn't matter. While it's rather short of extras (just six one-minute promo featurettes), this Blu-ray thankfully proves rather more satisfying from an AV standpoint thanks to its striking AVC 2.40:11080p visuals and full-bodied DTS-HD MA 5.1 soundtrack.



While We're Young

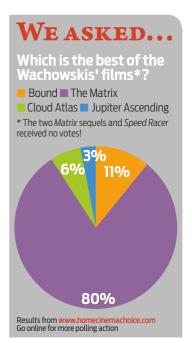
Icon Film Distribution → All-region BD £18 approx



Indie filmmaker Noah Baumbach mines the generation gap for laughs with this Woody Allen-esque tale of a

middle-aged married couple (Ben Stiller and Naomi Watts) who try to recapture their youth after befriending a pair of much younger hipsters (Adam Driver and Amanda Seyfried). Shot digitally using Arri Alexa Plus cameras, the film's rather subdued aesthetic may not be particularly dazzling, but is perfectly replicated in this Blu-ray's 1.85:1-framed 1080p transfer. Likewise, while the DTS-HD MA 5.1 mix is understated, dialogue and music are rendered with aplomb.







The Penn isn't mightier than the gun

Po-faced action-thriller packs in plenty of acting talent but forgets to bring the fun

→ THE GUNMAN

Eight years ago black ops specialist Jim Terrier (Sean Penn) had to flee the Democratic Republic of the Congo after being involved in the assassination of the Minister of Mining. However, the past has finally caught up with Terrier and somebody from his old organisation appears to want him dead. Forced to go on the run across Europe, he tries to discover who is out to get him while unexpectedly reconnecting with the lover (Jasmine Trinca) he was forced to abandon all those years ago.

On paper *The Gunman* has a lot of things in its favour. Not only does it boast an impressive cast (including Sean Penn, Javier Bardem, Mark Rylance and Idris Elba), it's helmed by Pierre Morel – the lensman who gave Liam Neeson his late-career makeover with 2009's blockbuster *Taken*. Yet, for some reason, it never quite comes together. The action scenes are skilfully assembled (and the beefed-up Penn is a convincing brawler), but the connecting material doesn't satisfy due to some haphazard storytelling. Furthermore, there's a tiring seriousness to the whole endeavour, as if the film is trying to convince you that it has an important point to make rather than accepting that it's nothing more that a run-of-the-mill actioner.

But even if *The Gunman* isn't the next *Taken*, it's no *Taken 3* either, which is something in its favour. *Picture: The Gunman* lands on Region B Blu-ray with a visually-arresting AVC 2.40:11080p encode. The razor-sharp image not only displays a high level of detail, it also serves up a palette of punchy primaries that seem to pop out of the screen. While contrast



intentionally runs a little hot, black levels are stable and hold plenty of clandestine info.

Audio: The Gunman is StudioCanal's first foray into the world of Dolby Atmos. We'll be reporting on the mix at length in an in-depth Dolby Atmos investigation in a forthcoming issue. Look out for it!

Most buyers, of course, will make do with the core Dolby TrueHD 7.1 track. This proves to be an enjoyable alternative thanks to its effortless spatial immersion. While the gunfights impress the most, it also works hard to paint a full sonic picture, relishing the bustling pan-Europe locations, including – memorably – a bull fight.

Curiously, StudioCanal's Blu-ray also houses a DTS-HD MA 5.1 soundtrack.

Extras: Disappointing extras take the form of four short promo featurettes, plus very brief interviews with actors Mark Rylance, Pierre Morel and Ray Winstone. Not worth bothering with.





HCC VERDICT

The Gunman

→ StudioCanal → Region B BD

→ £23 approx

WE SAY: This Blu-ray delivers more
thrills than the movie with its
first-class sound and picture





From sci-fi Cinderellas to jet-skating wolfmen, the Wachowskis' latest is truly out of this world





Jupiter Ascending's budget is rumoured to have topped \$175m

→ JUPITER ASCENDING 3D

Rarely have promising filmmaking careers imploded quite as spectacularly as those of Andy and Lana (née Larry) Wachowski. Having impressed critics with their inventive crime thriller Bound in 1996, the duo then delivered 1999's best science-fiction film (The Matrix) – something few could have predicted in a year that would also see the long-awaited start of a brand-new Star Wars trilogy. Yet since then they've endured a steady decline through dismal sequels and epic follies. Which brings us neatly to the duo's new space opera, Jupiter Ascending...

Essentially a space-age version of Cinderella. the film stars Mila Kunis as Jupiter Jones, a Russian émigré who spends her days cleaning the toilets of wealthy Americans. Her life changes when she goes to a clinic to have her eggs harvested as part of a moneymaking scheme, only for the doctors to turn out to be aliens. Rescued by half-human half-wolf space soldier Caine Wise (Channing Tatum), Jupiter learns that Earth was actually seeded with human life by alien royalty, which is now getting ready to harvest us.

Still with us? Good, because it also turns out that Jupiter is the genetic reincarnation of the alien queen whose offspring are now arguing over the rights to humanity's future. And she can control bees.

Jupiter Ascending is quite simply a mess. While the Wachowskis once again prove to be wonderful world builders (this time cooking up an entirely new universe), they have seemingly forgotten how to refine their many, many ideas into a single coherent storyline.

Nor, it turns out, have they any idea how to write dialogue that sounds like anything a real person might say – 'Bees don't lie,' utters Sean Bean at one point, deserving a Best Actor Oscar for his ability to keep a straight face at the same time. And speaking of Oscars, is it possible to ask Eddie Redmayne to give his back as punishment for his bewildering,

astonishingly awful performance as Jupiter Ascending's villain Balem?

The film's two leads don't fare much better. Channing Tatum handles the action stuff with ease, but looks ridiculous doing it. Someone decided to dress him like a space-skating escapee from Starlight Express with silly prosthetic pointy ears. Things are even worse for Kunis, who gets next to nothing to do in the movie apart from get captured and then saved over and over again. Progressive, this ain't.

With all that said, Jupiter Ascending isn't a complete write-off. The visual effects and production design are all superb, and the action beats are directed with the sort of energy you'd expect from the people who gave us The Matrix.

Mila Kunis as Jupiter Jones (right): bee-controlling, toilet-cleaning alien clone

Demo Screen...

Jupiter Ascending 3D

Time code: 025.45 - 031.33



Beam me up: Caine's attempt to beam Jupiter up to his spaceship is thwarted when the vehicle is destroyed, allowing the Blu-ray the chance to show off plenty of 3D depth as they fall to Earth.



Streets of fire: The action heats up as Caine engages his anti-gravity skates and leads the enemy craft on a chase through the streets of Chicago, with lasers and explosions rocking the soundfield.



A change of plans: Outgunned at every turn, Caine decides to use the enemy's own weapons against them; taking control of one of the alien craft and chasing the rest with all guns blazing!



Big bang theory: The Wachowski siblings bring the action to a spectacular climax with a roomrattling explosion that really showcases the potency of the soundtrack's LFE channel.

Picture: It may have been shot 'flat' and converted in post-production, but *Jupiter Ascending* delivers an excellent 3D experience on Warner's Blu-ray. Colour saturation and brightness are both comparable to the 2D version, while image depth is stonking, aided by the terrific clarity and sharpness of the 2.40:1-framed encode. Even the more hectic action scenes (Chapter 9's blockade run being a key example) are utterly convincing, with coherent use of volumetric space to immerse you in the onscreen action.

Unsurprisingly, the AVC-encoded 2D version of the film (supplied on a separate platter) looks equally impressive. Colours are bold, intricate textures are resolved perfectly and edge definition is flawless. Pure reference quality, from start to finish. *Audio: Jupiter Ascending*'s core Dolby TrueHD 7.1 mix (as with *The Gunman* previously, this has an Atmos track that we'll be covering in a forthcoming issue) is a hard-hitting soundtrack bursting with bold bass and spatial effects that makes explosive use of the full soundstage. In fact, as far as engaging 360-degree audio is concerned, *Jupiter Ascending* is one of the most aggressive and enveloping examples we've encountered in some time. Sequences such as Caine's rescue of Jupiter (see *Demo Screen* above)



are a riot of LFE thuds, whooshing space craft and pulsing space-age weaponry. Subtlety isn't the word here, but we're not complaining.

Extras: The 2D disc is where you will find the bonus material – a modest selection of behind-the-scenes featurettes, but nothing particularly substantial (there are seven in total, ranging in length from five minutes to 10 minutes). Pick of the bunch is Bullet Time Evolved (10 minutes), which focuses on how the Wachowskis set about delivering Jupiter Ascending's set-pieces. Other topics explored include the characters of Jupiter Jones and Caine Wise, the film's genetically-created beasties, the Wachowskis themselves and the multi-layered world they created for the movie.









HCC VERDICT

Jupiter Ascending 3D

→ Warner Bros. Home Entertainment

→ All-region BD → £28 Approx

WE SAY: Fans of bad films are in for a
treat with this spectacular looking and
sounding cinematic folly

Movie	****
Picture	****
Audio	****
Extras	****
verall 🛨	***

П

ARCADE ACTION

Bigscreen home entertainment isn't just about movies. Check out these two videogames vying for time on your home cinema system...

LEGO Jurassic World

Warner Bros. Interactive → X360/XOne/PS3/PS4/PC/Wii U → £30 approx



Reviewing LEGO videogames can be pretty tricky. After all, they follow the exact same formula: take one popular film franchise, give it a LEGO makeover and let gamers play their way through key scenes, bashing blocks and collecting studs as they go.

LEGO Jurassic World does nothing to buck the trend, offering gamers the chance to play through all four films in the series, exploring open-world versions of both Isla Nublar and Isla Sorna. The individuals levels recreating key scenes from the film (five for each movie) remain every bit as fun and fiendish as ever, packed

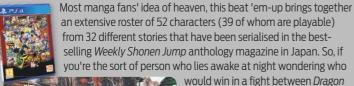
with an endless array of secrets waiting to be unlocked.

If there's an obvious issue with choosing to adapt this franchise into the existing template, it's that outside of the principal cast, there really aren't that many characters – meaning that many of the unlockable minifigs are spectacularly dull (Hotdog Vendor, anyone?). The game attempts to make up for this with its key USP – the ability to unlock and take control of 20 dinosaurs. These big beasts don't really change things all that much, but it's still hard not to crack a smile as you stomp around a level as a LEGO Tyrannosaurus Rex. In fact, these pre-historic playmates bring a real sense of fun back to a gaming franchise that had started to look tired in recent years.



J-Stars Victory Vs. +

Namco Bandai - PS4/PS3 - £40 approx



would win in a fight between *Dragon Ball*'s Son Goku and *Fist of the North Star*'s Ken Shiro, then this is surely the next-gen arena brawler you've been waiting for.

However, once the initial thrill of seeing Assassination Classroom's Koro-sensei

sharing screen time with *Hell Teacher Nube*'s Meisuke Nueno has worn off, what you're left with is a rather basic fighting game that is unlikely to hold the attention of seasoned joystick junkies for very long. Nor does this PlayStation 4 incarnation really live up to its next-gen billing when it comes to visual prowess. The character models look great and their special moves deliver plenty of fireworks, but the arenas themselves suffer from muddy textures that betray the game's origin as a PS3 title.

J-Stars Victory Vs. + is a pleasure to dip in and out of, but not quite the bombastic experience we'd hoped for.



Jonathan Strange & Mr. Norrell

Acorn Media → All-region BD £30 approx



BBC One's spectacular sevenpart adaptation of Susanna Clarke's alternate history novel cuts a particularly impressive figure on Blu-ray. The intricately detailed 1.78:1-framed 1080i50

encodes show off the wonderful production design and cinematic visual effects, while the rich LPCM 2.0 audio proves adept with dialogue, effects and music. The two-disc set also conjures up some very informative extras, including a 25-minute *Making of...* and six deleted scenes.



Quatermass

Network → Region B BD £30 approx



Nigel Kneale gave his most famous creation a particularly downbeat send-off in 1979 with this four-part serial that finds the aging Quatermass hunting for his granddaughter as society

collapses around him – and that's before an alien force turns up and starts harvesting humans by the thousand. Restored from the original 35mm negatives, *Quatermass* looks excellent on Blu-ray and is supported by a choice of LPCM mono and DTS-HD MA 5.1 soundtracks. Extras include music-only tracks, episode recaps and the alternate feature film edit of the serial.



Electric Boogaloo

Metrodome → R2 DVD £20 approx



Subtitled 'The Wild, Untold Story of Cannon Films', Mark (Not Quite Hollywood) Hartley's latest documentary charts the rise and fall of the indie studio whose trashy output filled the

shelves of video rental stores throughout the 1980s. More entertaining than 99 per cent of the films Cannon released, *Electric Boogaloo* is a must-see for everyone who grew up on a diet of films like *Breakin'*, *Missing in Action* and *Lifeforce*. The DVD itself looks and sounds fine, but is devoid of extras.





We're still taken with Liam Neeson

The ageing action star provides a welcome reminder of his acting chops in this gritty thriller

→ Run All Night

Washed-up former hitman Jimmy Conlon (Liam Neeson) finds himself going head-to-head with his best friend, Irish mob boss Shawn Maguire (Ed Harris), when he kills Shawn's son in order to save the life of his own estranged son Mike (Joel Kinnaman). With the mob, corrupt cops and a hired killer hot on their trail, Jimmy and Mike must go on the run in order to stay alive...

In the wake of *Taken 3* (see p95) the thought of having to sit through another sub-par Liam Neeson action movie was simply too much to take. Thankfully, despite the gun fights and car chases, *Run All Night* turns out to be an entirely different and far more satisfying proposition.

As with the actor's previous collaborations with Spanish director Jaume Collet-Serra (*Unknown* and *Non-Stop*), *Run All Night* is a more character-based thriller than the *Taken* sequels. For all of the fun that comes from watching Neeson casually gunning down mobsters in a bar or brawling with a hired killer in a burning apartment, the film is at its best when it sinks its teeth into Jimmy and Shawn's friendship and their damaged relationships with their own children.

Picture: Unknown and Non-Stop cinematographer Flavio Martínez Labiano may not have returned for Run All Night, but newcomer Martin Ruhe sticks with a very similar aesthetic approach that pushes teals and oranges to the fore, while seemingly carving the image out of rough-hewn grain.

As 'gritty' as the AVC 2.40:1 1080p image looks when paused, in motion it reveals a surprisingly refined level of detail. Indeed, outside of the deliberately crushed blacks, the only time the transfer really falls down is during Chapter 11's mist-shrouded final showdown, where several character

silhouettes are riddled with obvious noise. **Audio:** Run All Night sprints onto Blu-ray with an extremely satisfying DTS-HD MA 7.1 soundtrack.

Naturally, it's the action scenes that really show off the mix's dynamic abilities. Every blow packs a tangible punch – check out the use of bass and reverb when Jimmy smashes a mobster into a toilet cubicle during Chapter 5's fight in a subway station.

Panning effects and positional cues really benefit from the use of the two extra channels, creating a much more precise and encompassing soundscape. Amongst all of this, dialogue is prioritised in the mix without ever sounding divorced from the action playing out around it. Nothing at all to complain about here!

Extras: Sadly, there's not much to get stuck into when it comes to bonus features. Shoot All Night (10 minutes) and Liam Neeson: Action All Night (six minutes) are rather perfunctory featurettes dealing with the making of the film and its leading man. More interesting by far are the six deleted/extended scenes, which not only provide more character beats but also reveal a change in Jimmy's backstory that was presumably done to make the character a little more likeable.



Vincent D'Onofrio is having a killer 2015 with roles in Daredevil and Jurassic World



HCC VERDICT

Run All Night

→ Warner Bros. Home Entertainment → All-region BD → £25 approx **WE SAY:** A superior thriller that reminds you that Liam Neeson can act just as well as he can punch





Bigger doesn't mean better

Was the big screen a step too far for Gerry Anderson's sci-fi puppet show?

→ Thunderbirds Are Go & Thunderbird 6

Having already conquered the small screen, Gerry Anderson's iconic puppet show targeted cinemas with two feature film outings. *Thunderbirds Are Go* (1966) has International Rescue called in to oversee the launch of the Zero-X spacecraft due to fears of sabotage. Following this, *Thunderbird* 6 (1968) involves The Hood gaining control of a futuristic airship as part of yet another plan to acquire the secrets of the Thunderbird vehicles.

Sadly, outside of the excellent model work and special effects, neither title makes any real use of the extra scope afforded by being produced for the cinema. Instead, both simply feel like regular episodes of the TV show that have been needlessly padded with 40 minutes of extraneous material. *Thunderbirds Are Go* is particularly guilty of this – there's a mind-numbingly dull 10-minute sequence of the Zero-X being assembled for flight and a later dream sequence/musical number featuring puppet versions of Cliff Richard (Jr) and The Shadows.

Thunderbird 6 is a little more entertaining, making room for some actual characterisation between all of the spectacle. But even this can't paper over the issues concerning the film's plot and pace.

Still, as far as fans of the series are concerned, it's the technical accomplishments of Anderson and his team that make these movies enjoyable. And, if nothing else, they're much more fun than the abominable live-action flick released in 2004. *Picture:* The two films arrive on Blu-ray with 1080p encodes framed at 2.35:1. Technically, the two



Blu-rays look very similar, with saturated colours and strong detailing being offset by the particularly thick grain that typifies the Techniscope two-perf film format. More importantly, dirt, scratches and other print damage is negligible at best.

Audio: Both films come accompanied by DTS-HD Master Audio presentations of their original mono soundtracks and more recent 5.1 remixes. As the latter still remain fixated on the centre channel for the most part, with brief explorations of the surround speakers feeling rather unconvincing, we recommend sticking with the mono tracks.

Extras: These Blu-ray releases pack in plenty of extras including chat-tracks by Sylvia Anderson and director David Lane, isolated music tracks and retrospective videos (keep an eye out for HCC writer and Anderson expert Richard Holliss). Curiously, one 14-minute interview – Gerry Anderson's Countdown to Thunderbirds – is repeated on both discs.





HCC VERDICT

Thunderbirds Are Go & Thunderbird 6

→ Fabulous Films → Region B BD → £20 each approx **WE SAY:** Decent HD treatment of two disappointing cinematic adventures



Dead of Winter

88 Films → Region B BD £15 approx



A curious addition to the label's 'Slasher Classics Collection', *Dead of Winter* finds director Arthur Penn

doing his best Hitchcock impression with its story of a struggling actress (Mary Steenburgen) lured to a remote mansion for a screen-test only to find herself caught up in a nefarious blackmail plot. This enjoyable 1987 thriller arrives on Blu-ray with a rather inconsistent 1.85:1 Full HD encode that is prone to excessive noise mixed in with the authentic grain in some shots. The LPCM 2.0 soundtrack fares better, despite being rather quiet, while the sole extra is a stills gallery.



Parks and Recreation: Season 7

Fabulous Films → R2 DVD £30 approx



This final outing for the acclaimed sitcom might not be its best, but once you've adapted to the leap forward in time its

13-episode run proves a fitting farewell to the rich array of characters the show has gifted fans. From a purely technical standpoint, this three-disc release is on a par with its predecessors, even if the second Chapter point in each episode is no longer immediately after the opening credits (which is a bit annoying if you want to skip them). Extras include the usual array of extended cuts and deleted scenes, plus a 47-min Making of... doc.



The Second Best Exotic Marigold Hotel

Twentieth Century Fox → All-region BD £25 approx



While this sequel easily lives up to its title when compared to the 2012 original, the warmth and wit engendered by

the fantastic cast (Maggie Smith, Judi Dench, Bill Nighy, et al) makes it easy to overlook the rather pedestrian plotting. This Blu-ray release delivers a pleasing AV experience courtesy of a detailed, vibrant AVC 2.40:1 Full HD encode and lively DTS-HD MA 5.1 mix that bring the exotic Jaipur locations to life. Extras are rather less exciting, consisting of just six three-minute promo featurettes, a photo gallery and two trailers.



Still Alice

Artificial Eye → Region B BD £23 approx



Julianne Moore fully deserves the Best Actress Oscar she was given for her affecting performance in this

remarkable melodrama about a linguistics professor diagnosed with Early-Onset Alzheimer's Disease. While *Still Alice* doesn't exactly lend itself to much in the way of home cinema thrills, those of you who do give it a spin on Blu-ray should be more than satisfied with the technical quality of the film's nuanced 1.85:11080p visuals and understated DTS-HD Master Audio 5.1 soundtrack. The disc also includes 13 cast and crew interviews plus the trailer.





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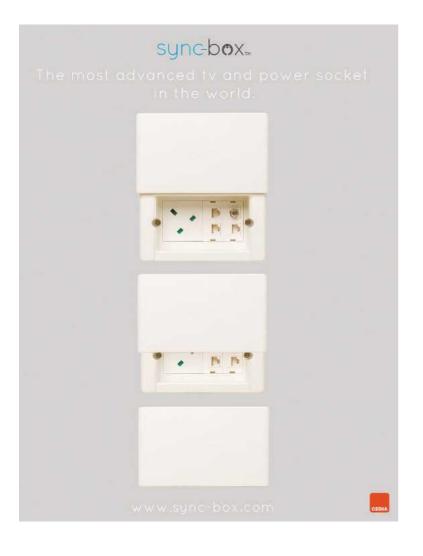


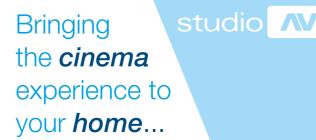




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David Cronenberg's horrific vision of TV's future comes of age with this comprehensive Blu-ray





HCC VERDICT

Videodrome: Limited Edition

→ Arrow Video → Region B BD &

R2 DVD → £28 approx

WE SAY: This stunning limited edition
is a must for any David Cronenberg fan.

Grab a copy before they sell-out!



→ VIDEODROME: LIMITED EDITION

The apotheosis of Canadian filmmaker David Cronenberg's obsession with body horror and the externalising of psychological terrors, the worryingly prescient *Videodrome* deals with a TV exec (James Woods) looking for ever more extreme content to show on his sensationalist station. When he chances across a pirate broadcast featuring what appears to be scenes of real torture he becomes obsessed, leading him into a world of terrifying hallucinations and violent conspiracies.

Picture: Videodrome first appeared on Blu-ray in the UK at the tail end of 2011 courtesy of Universal Pictures and was a problematic release to say the least. The disc offered no extras whatsoever, appeared be based on a dated HD master that was cut, and showed signs of excessive DNR and edge enhancement.

Thankfully, this second hi-def release uses the restoration (supervised by cinematographer Mark Irwin and approved by David Cronenberg) that was undertaken by the Criterion Collection for its 2010 US Blu-ray release. From fine detailing to clarity, colour saturation to black levels, there isn't a single aspect of this AVC-encoded 1.85:11080p image that isn't a vast improvement on the original UK release. The biggest surprise is the shadow delineation, with even the darkest shots containing plenty of detail. *Audio:* While the disc's uncompressed PCM mono soundtrack doesn't have quite the same impact as

the hi-def imagery it accompanies, you'd be hard pressed to find any real fault with it. Dialogue is rendered with clarity and precision, sound effects are suitably squishy and Howard Shore's score energises everything with its terrific acoustic presence.

Extras: This double-disc limited edition Blu-ray is a treasure trove of goodies for any Cronenberg fan.

The first platter is devoted to *Videodrome* and includes a 1997 documentary about Cronenberg's films (*Cinema of the Extreme*); a look at the special effects (*Forging the New Flesh*); a 1982 roundtable with Cronenberg, John Carpenter and John Landis (*Fear on Film*); the complete *Samurai Dreams* footage from the film; Helmet Camera test footage; an archival promo featurette; new interviews with Mark Irwin, producer Pierre David and novelisation author Dennis Etchinson; the 16 deleted scenes that only appeared in the TV edit of the film; three trailers and Cronenberg's short film *Camera* (2000).

In lieu of the filmmaker and actor chat-tracks that appear on the Criterion disc, film historian Tim Lucas (who was present on the set during shooting) has recorded a fact-packed commentary for this release.

The second disc, titled *David Cronenberg's Early Works*, features impressive restorations of four of his earliest films – *Transfer* (1966), *From the Drain* (1967), *Stereo* (1969) and *Crimes of the Future* (1970). It also houses a piece with critic Kim Newman discussing the movies along with the early work of Tobe Hooper and Brian De Palma.

Also included is a 100-page book featuring seven essays about *Videodrome* and those early flicks.

The Human Centipede 3 [Final Sequence]

Monster Pictures → Region B BD £20 approx



Writer-director Tom Six takes his extreme horror franchise further into 'meta' territory with this final outing. Among all

of the stomach-churning nastiness, Dieter Laser steals the show with his portrayal of a bonkers prison boss who, after being persuaded to watch the first two films, calls in Tom Six for advice on making a human centipede out of his convicts. Should this sound up your street, then you'll be happy to learn that the Blu-ray delivers rich 2.40:1 Full HD visuals, forceful DTS-HD 5.1 sonics, a 25 minute Making of... and a (superior) alternate ending.



A Girl Walks Home Alone at Night

StudioCanal → Region B BD £23 approx



This charming and stylish film stars Sheila Vand as a vampire who has spent her (after)life haunting the lonely

streets of Iranian ghost town Bad City. Channelling the spirit of early period Jim Jarmusch (with a dash of David Lynch for good measure), writer-director Ana Lily Amirpour has crafted an artful genre mash-up whose retro-cool aesthetics more than make up for a rather oblique narrative. The Blu-ray doesn't disappoint either, thanks to its chic 2.40:11080p black-and-white transfer, melodic DTS-HD 5.1 mix and informative extras.



Contamination

Arrow Video → Region A/B BD & R1/2 DVD → £18 approx



Luigi Cozzi's 1980 Alien knock-off was never going to bag an Oscar, but that doesn't mean that this former Video

Nasty isn't enjoyable – although it helps if your idea of fun involves seeing bodies exploding in unconvincing showers of blood and gore. While the film may be Grade-A schlock, this hasn't stopped Arrow from putting together a decent Blu-ray release. The beautifully restored 1.85:1 Full HD transfer will be enough to satisfy most fans, and the label has also packed the disc full of extras, including a fan commentary, interviews and a graphic novel adaptation.



Hawk the Slayer

Network → Region B BD £15 approx



This cheesy 1980 swords-and-sorcery flick stars John Terry (not *that* one) as Hawk, a square-jawed hero

out to stop his evil brother Voltan (Jack Palance). Regarded as something of a cult classic these days, *Hawk the Slayer* is every bit as cheap and cheerful as you'd expect a low-budget British fantasy film to be — and we wouldn't want it any other way. Remastered from the original 35mm negatives, the Blu-ray's 1.75:1-framed 1080p encode looks better than expected (despite persistent dirt and speckles). The disc also hosts a fine selection of archival interviews and promo videos.





'Laugh while you can monkey-boy'

It may have flopped at cinemas, but this '80s cult flick will win plenty of fans on BD

→ THE ADVENTURES OF BUCKAROO BANZAI ACROSS THE 8TH DIMENSION

Rock star/neurosurgeon/particle physicist Buckaroo Banzai (Peter Weller) is called upon to save the day when Earth is threatened by inter-dimensional 'Lectroids from Planet 10' led by the insane Dr. Lizardo (John Lithgow).

The very definition of a cult film, ...Buckaroo Banzai is like nothing else you've ever seen. Packed full of crazy characters and concepts, this bonkers genre hybrid is borderline incoherent at times, but it's also a absolute blast of pure, unadulterated, nutty fantasy that should leave a big grin on your face.

Picture: ...Buckaroo Banzai's loyal fanbase will be delighted with the care and attention that has evidently been given to bringing the film to Blu-ray.

Created from a 35mm interpositive for MGM, with additional cleanup work undertaken by Arrow, the 2.35:1-framed 1080p master is in very good shape. While the print still shows some minor speckles, colour reproduction is suitably rich, detailing is strong and darker scenes are free from noise. The encode also boasts an authentically film-like appearance, doing an excellent job of resolving the heavy grain that is typical for the types of filmstock used in the mid-'80s. The result is easily the best the movie has looked since its brief run in cinemas.

Audio: The disc offers a choice of two soundtracks. The remastered LPCM presentation of the original stereo track will be the first port of call for purists, but MGM's DTS HD-MA 5.1 remix shouldn't be discounted out of hand. It's not exactly subtle,



but the way the audio has been opened out during some of the bigger set-pieces matches the energy of the movie itself. It also brings added depth and tonality to Michael Boddicker's memorable electronic score.

Extras: Unlike MGM's original barebones UK DVD release, this Blu-ray release is loaded with goodies. Making their debut on this platter are a pair of interviews with Peter Weller (17 mins) and John Lithgow (14 mins) that were recorded earlier this year, plus a Q&A session featuring the actors and hosted by Kevin Smith (43 mins), which was recorded at New York's Lincoln Center in 2011.

The disc also ports across most of the extras from the 2002 R1 Special Edition DVD, including a chattrack, 14 deleted scenes and an alternate opening that can be watched separately or as part of the film.

Accompanying the Blu-ray is a 20-page booklet containing a new essay by film critic James Oliver.





HCC VERDICT

The Adventures of Buckaroo
Banzai Across the 8th Dimension

→ Arrow Video → Region B BD

→ £18 approx
WE SAY: The definitive home release
of this bonkers 1984 cult hit





Star power trumps narrative flaws

Let Will Smith and Margot Robbie con you into enjoying this light and frothy caper

→ Focus

After a series of duds stretching back several years, Will Smith rediscovers his mojo playing third-generation con artist Nicky Spurgeon in this likeable cinematic caper. Nicky's perfectly ordered life starts to get a little more tricky when he agrees to mentor inexperienced grifter Jess Barrett (Margot Robbie), only to start falling in love with her. But is their relationship real or just part of yet another con?

Fun, slick and sexy, Focus is a fine example of what the right actors can bring to a film. While the twisting narrative ends up feeling a little unfocused, the sheer charm and chemistry of the two leads ensures it remains entertaining. It's been a long time

since audiences have seen Smith having this much fun on screen, and it's a reminder of how affable his screen persona can be. Meanwhile, the impossibly beautiful Robbie proves to be an ideal partner in crime, matching Smith stroke for stroke when it comes to comic timing and charisma.

Picture: Warner's AVC 2.40:11080p encode brings the strength of the film's cinematography to the fore. Colour saturation is wonderfully rich (check out the close-ups of Smith's neon-lit face in Chapter 3), black levels are suitably inky and detail levels remain strong throughout. Very impressive.

Audio: Devoid of fights, car chases and shoot outs, Focus doesn't seem like the type of film that is crying out for a DTS-HD Master Audio 7.1 soundtrack on Blu-ray. However, what it lacks in powerful dynamics



it makes up for with its playful approach to atmospheric audio (as evidenced by the use of positional cues during the transition to the Buenos Aires race track in

Chapter 6). Meanwhile, the grifter dialogue sounds rich and warm, and remains perfectly intelligible and all times.

Extras: Best of a meagre bunch is Masters of Misdirection: The Players in a Con (10 minutes), which talks to the consultants who aided the filmmakers about the art of swindling. The two other featurettes – Will Smith: Gentleman Thief (six minutes) and Margot Robbie: Stealing Hearts (four minutes) – are typical studio puff pieces. The disc also includes four deleted scenes and an alternate opening.

HCC VERDICT

Focus

→ Warner Bros. Home Entertainment → All-region BD → £25 approx WE SAY: A fun 'rom-con' made that bit more enjoyable on Blu-ray by its superb picture and sound quality



Hue and Cry

StudioCanal → Region B BD £23 approx



Regarded as the first of the 'Ealing Comedies', this 1947 film tells the story of a group of East End kids who come to believe that a comic book is being used to pass secret messages to

a criminal gang. As much a (family-friendly) thriller as it is a comedy, *Hue and Cry* was shot almost entirely on location and makes fine use of rubble-strewn sites around post-war London to imbue its *Boy's Own* tale with a sense of adventure. This welcome hi-def outing offers up a beautifully restored 1.37:1 1080p encode, clear LPCM mono audio and a tour of its London locations with film historian Richard Dacre.

The Flying Deuces

Network → All-region BD £15 approx



One of only two Laurel and Hardy films to reside in the public domain, 1939's *The Flying Deuces* has now

become the first of their vast body of work to make it onto Blu-ray. The bad news for fans of the legendary comedy pairing is that the disc's 1080p transfer (based on a restoration by BBC Digital Media Services) is lacking in fine detail thanks to a mix of crushed blacks and the sort of waxy smearing that smacks of over-zealous noise reduction. The only extras on offer are the German-language dub of the film (Dick und Doof in der Fremdenlegion) and a sizeable gallery of promo art and stills.



The Man with the Golden Arm

Network → All-region BD £15 approx



Otto Preminger's 1955 noir-tinged melodrama made waves on its original release with its stark depiction of drug

addiction. While the story it tells doesn't have quite the same bite today, there's no denying the power of Frank Sinatra's central performance. This UK Blu-ray is the best-looking version of the film we've seen, with the 1080p encode looking clean, sharp and maintaining the original 1.66:1 aspect ratio. The only real disappointment is Network's inability to deliver anything more exciting than a photo gallery when it comes to extras.



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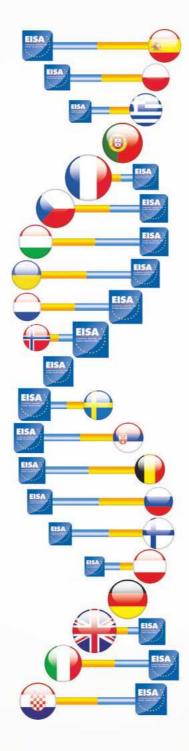
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LG 65EC970V→£6,000 ★★★★★

OLED tech married to a native 4K panel is certainly a winner - this screen routinely boggles with its black levels and detailing. But it has competition from Samsung's HDR sets. HCC #248



Sony KD-65X9005B→£3,600 ★★★★

A groundbreaking set from last year. The 'Wedge' cabinet design affords room for a best-in-class audio performance from the side-mounted speakers, while imagery is hard to fault. HCC #236



Samsung UE55HU7500→£2,300 ★★★★★

Don't want the curved form or higher price of the HU8500 range? Then step down to this flat model. No One Connect box, but otherwise it's equally impressive in PQ terms. HCC #239



Panasonic TX-42AS600→£430 ★★★★★

An example of the value that can be found in modern-day Full HD sets. This 42-incher offers the best elements of Panasonic's Smart system, dynamic images and a great price. HCC #240



LG 55EC930V → £2,000 ★★★★★

OLED at an attainable price (well, almost), this 55-incher employs LG's WebOS platform and curved design. Full HD resolution, but the picture quality is stunning at times. HCC #243



Loewe Connect 55 →£2,800 ★★★★

Superb video processing and onboard PVR functionality are the highlights of this 55in 4K screen, but the lack of UHD streaming services, and a clunky interface, disappoint. HCC #249



Panasonic TX-55AX902→£3,000 ★★★★

Superior screen uniformity and crystal-clear detailing abound with Panasonic's pricey flagship LED screen, but motion processing isn't perfect. HCC #244



LG 65UF850V →£2,500 ★★★★

A good (but not brilliant) all-round package, mixing a 4K IPS panel, webOS 2.0 interface and a sleek design. Image quality suffers from average blacks and fussy motion. HCC #249



Sony KD-65X9005C→£3,500 ★★★★

This set's stunning design – it's Sony's thinnest ever TV – and colour-rich, sharp 4K visuals impress. However, the Android TV OS feels a little undercooked at present. HCC #249

Tech Info: Televisions



What? No plasma?: The TV market is now dominated by LED-lit LCD screens. Manufacture and sale of plasma display panels (PDPs), which previously came into play above 42in, has ceased, although you may still find some end-of-line stock. With LED comes newer technologies. 4K models with a native resolution of 3,840 x 2,160 should at least be on your audition list if you're thinking of a new display; curved models are also a consideration if you want to really impress the neighbours. OLED technology is championed by LG.



Active or Passive: At the beginning of the 3D era, most TVs featured the Active system that uses relatively expensive, powered 3D specs to deliver full-res images to each eye. Passive 3D TVs, which are now more common, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). The same halving occurs with a 4K screen. Some brands offer both Passive and Active models, depending on the panel used. Glasses-free 3D, heralded by Toshiba's early ZL2 TV, hasn't caught on, but still may make headway.

BLU-RAY MOVIES



The Book of Life 3D

This colourful 'toon produced by fan-favourite Guillermo del Toro draws heavily on Mexican folklore – the result is a visual champion in both its 2D and 3D incarnations, and a shot in the arm for the animation genre. ****



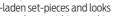
Birdman

This unusual Oscar-winning drama (filmed to appear as a continuous take by director Alejandro González Iñárritu) surprises on Blu-ray with its always involving DTS-HD 5.1 mix and beautiful 1.85:1 visuals.



Exodus: Gods & Kings

This big-budget biblical epic from Ridley Scott doesn't capture the narrative highs of Gladiator, but dazzles with its SFX-laden set-pieces and looks and sounds astonishing on this hi-def platter.





Big Hero 6

Energetic 'toon based on a Marvel comic, Big Hero 6 mixes supervillain battles with a warm, touching narrative. Disney's hi-def disc offers a crisp 2.39:1 encode and effects-laden DTS-HD MA 7.1 mix.





Interstellar

Christopher Nolan's monsterbudget cerebral sci-fi is a real Blu-ray showcase, with its IMAX-shot footage deserving of the biggest screen you can find, and Hans Zimmer's score sounding simply stunning.





Top 10 BLU-RAY PLAYERS

All prices are approx and may have changed



Oppo BDP-103D→£600 ★★★★★

Oppo's first deck for two years was worth waiting for. The universal BDP-103EU featured a class-leading build and all manner of bonus goodies, including twin HDMI inputs. AV performance was faultless, and the onscreen menus superb. This newer model, the BDP-103D, adds Darbee Visual Presence processing for you to play with. HCC #228



Pioneer BDP-LX88→£1,300 ★★★★★

The Japanese corp returns to the disc-playing high-end with a universal deck that weighs more than your AVR and drips with user tweaks and processing features. Stonking performer. HCC #246



Oppo BDP-105D→£1,100 ★★★★★

This heavyweight deck builds upon the premium picture performance of the BDP-103D with a wealth of audiophile upgrades — if you're serious about music, check it out. *HCC* #234



Arcam FMJ UDP411→£1,200 ★★★★★

Pristine visuals – including upscaled SD – and a classy sonic performance grant this Arcam instant appeal. The design and build is commensurate with the premium price tag. HCC #244



Sony BDP-S7200 → £220 ★★★★

A Sony deck without the curious angular design, the BDP-S7200 offers SACD support, hi-res audio streaming and 4K upscaling that's worth investigation. Not too pricey, either. HCC #239



Panasonic DMP-BDT700→£500 ★★★★

Claiming THX-certified 4K upscaling and HDMI 2.0 60p passthrough, this mid-range deck from Panasonic is a good partner for a modern display. Great audio option, too. HCC #237



partier for a modern display. Great do

Samsung BD-J7500→£170 ★★★★
This well-priced spinner offers twin HDMI outputs and multichannel phono audio for flexible system hookup, an appealing design, Smart features and solid AV chops. HCC #247



LG BP645→£100 ★★★★

An affordable, likeable offering from LG. The BP645 claims Spotify compatibility and Wi-Fi-enabled headphone listening among its bonus features. Slim but lightweight design. HCC #236



Pioneer BDP-160→£130 ★★★★

The successor to the BDP-150 adds integrated Wi-Fi, making media file playback simpler. The Smart cupboard is still practically empty, but SACD support softens the blow. HCC #227



Toshiba BDX5500→£120 ★★★★

The key attraction of Toshiba's £120 player (aside from its 3D, Miracast, 4K scaling and DLNA features) is its small form factor and vertical alignment. Good for space-tight setups. *HCC #238*

TECH INFO: BLU-RAY PLAYERS

Matching your deck to your AV receiver: Blu-ray decks are designed to deliver top-notch images but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D video signals, in which case you'll need a deck with dual HDMI outputs – one channelling audio to your receiver amp, the other piping video direct to your TV.

What about the PlayStation?: Sony's console still represents an easy path to hi-def heaven. For a low-budget home cinema system, the £200 PS3 Slim (160GB) makes a decent choice — especially if you like playing games (in 3D, if you fancy it). Control via a joypad is a pain, though, and the console runs more noisily than most BD spinners. The newer, more expensive PS4 is a much better gaming machine, but won't play CDs!



DEMO DELIGHT

Edge of Tomorrow: This enjoyable, FX-packed Tom Cruise sci-fi scooped the Best Picture Quality gong in our Movie Awards. Shot on film for a realistic aesthetic, it transfers over to Blu-ray with a pristine 1080p image. The detailing is simply astonishing!



TOP 10 PROJECTORS

All prices are approx and may have changed



Sony VPL-VW300ES → £5,800

Auditioning the newest, most affordable member of Sony's 4K range is a no-brainer. It loses a shade of brightness and the lens memory feature of its VPL-VW500ES stablemate, but retains the cinematic verve. Top of the class. HCC #243



Epson EH-LS10000 → £6,000 ★★★★

Debuting a laser light source (30,000 hours) and Epson's 4K enhancement processing, this large chassis model is a cinematic triumph. Essential audition for a dedicated room. *HCC* #247



JVC DLA-X500R→£5,000 ****

Armed with a more adept third generation of the brand's proprietary e-shift technology, the X500R continues JVC's winning ways — contrast rich, sharp and full of tweaks. HCC #232



Epson EH-TW7200→£1,900 ★★★★

Priced to appeal to those unable to dabble in the £3,000 market, Epson's mid-ranger is a great purchase. No frame interpolation on offer, but colours, contrast and brightness impress. *HCC #232*



JVC DLA-X700R→£7,300 ★★★★

A hefty chunk more expensive than the X500R, but with an improved contrast performance (and more flexible installation options) that will reward those who splash the cash. HCC #238



Optoma HD50 → £1,000 ★★★★★

With a retweaked user interface that improves upon previous Optoma light-cannons, the 12V-trigger-toting HD50 is a brilliant budget buy. HCC #239



BenQ W1070+→£650 ★★★★★

An accomplished low-budget DLP model, the W1070+ offers ISF-certified calibration and a 12V trigger in conjunction with a sharp, bright, detailed performance. Bit of a bargain! HCC #240



Philips Screeneo HDP1590→£1,500 ★★★★★

Neatly designed, the Screeneo offers ultra-short throw projection thrills, albeit at 720p (and the DVB tuner is SD). Good speakers and networking skills complete a nice package. HCC #233



Sony VPL-HW55ES→£2,800 ★★★★★

Not one of Sony's 4K models, but this keenly priced Full HD projector delivers where it counts, with solid calibration options, simple setup and brilliant 2D visuals. No 12V trigger. HCC #230



ViewSonic PLED-W800→£500 ★★★★★

Portable (but not battery-powered) LED-lit PJ with 1,280 x 800 res. BDs look decent on a large screen, with nice colour punch, and it incorporates a useful media player. HCC #247

Tech Info: Projectors



Installation: Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be guite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

Throw distance: Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

Throw ratio: Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

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TOP 10 SPEAKERS

SPEAKERS

All prices are approx
and may have changed



Q Acoustics 3000 5.1 →£700

A superior compact package with driver improvements over the previous 2000i series. The two-way cabinets and dual-driver sub combine to offer seriously impressive audio for the money. Design and build rock, too. HCC #247



B&W 683 Theatre 5.1→£2,750 ★★★★

The first step on the floorstanding ladder in B&W's speaker stable, the 600 Series incorporates new tweeter and bass driver designs and offers absurd value for money. HCC #234



KEF R Series 7.1→£6,500 ★★★★★

A 7.1 array mixing dipolar and direct surrounds, this authoritative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale home cinema sonics. *HCC #217*

Artcoustic Spitfire SL 7.2 → £17,000 ★★★★

Slimmed-down cabinets now even easier to install on-wall or behind a screen, with a multi-driver design ensuring they're easy to drive to high SPLs. Ideal for dedicated rooms. *HCC #233*



Tannoy Precision Series 5.1 →£4,450 ★★★★

These speakers' classic look belies the brand's hi-fi heritage, but this multichannel setup works wonders with movies, too – a rich, large and dynamic sound is on offer. HCC #226



Wharfedale Diamond 220 HCP→£850 ★★★★★

This package offers a lot for less than a grand – two-way surrounds, a potent three-driver centre channel and agile subwoofer. Great movie sound and excellent build. HCC #248



Pioneer S Series 5.0.4→£2,150 ★★★★★

With Atmos-upfiring drivers incorporated into the cabinets (both the front floorstanders and surround standmounts) this is a neat way of upgrading your system. Bassy, fulsome sound. HCC #247



SVS Prime Satellite 5.1→£1,000 ★★★★★

These satellites are the smallest speakers from the US marque – but still sizable enough to deliver an impressive full-range performance. Quality subwoofer, too. HCC #249



Monitor Audio Radius R90HT1→£1,500 ★★★★★

The Radius speakers have been revamped with new drivers and rear ports, and this 5.1 set provides a clear, detailed sound with plenty of heft. Floorstanders are an option, too. HCC #230



Acoustic Energy 1-Series 5.1→£1,400 ★★★★

The unadventurous design won't appeal to some, but elsewhere this sensibly-priced floorstanding package ticks a lot of boxes. An unflustered sound that likes to go loud. HCC #246

TECH INFO: SPEAKERS



Centre speaker: Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

Front speakers: Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

Subwoofer: Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

Surrounds: Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 array.

DEMO DELIGHT

Godzilla: Hollywood tackles the iconic aquatic beastie once again, and the Blu-ray comes armed with a DTS-HD MA 7.1 mix that's dynamic, powerful, aggressive, detailed and expansive from start to finish. Check out Chapter 8's M.U.T.O. circling sequence for a masterclass in precision and control.

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TOP 10 AV RECEIVERS/AV PROCESSORS

All prices are approx and may have changed



Onkyo TX-NR3030 → £2,500

The current king of Atmos AVRs, this 11-channel design enables four height speakers to be added to an existing 7.1 array with ease. Lithe on its feet and with exemplary steering, this is multichannel audio at its best. HCC #245



Denon AVR-X7200WA→£2,500 ★★★★

Capable of being upgraded to DTS:X later in the year, and sporting HDCP 2.2 support, this Atmos AVR is as futureproofed as it gets. Only a nine-channel design, though. HCC #248



Denon AVR-X5200W→£1,700 ★★★★★

Offering Atmos – and Auro-3D via a paid upgrade – the Denon X5200W offers nine amp channels and 11.2 processing. Energetic sound and flexible setup. HCC #243



Onkyo TX-NR838→£1,000 ****

A nicely-specced mid-range AVR, offering 5.1.2 Atmos playback (as well as regular 7.1) in addition to HDCP 2.2 support, which will please future-gazers. Crisp-sounding sonics. HCC #240



Arcam AVR750→£4,000 ★★★★

If all you want from an AV receiver is vast power and effortless performance, this high-end 7.1-channel beast is tailored to you. Little bonus features beyond audio networking. HCC #225



Datasat LS10→£10,000 ★★★★

The 'entry-level' AV slab in Datasat's home audio range, this processor (upgradable to Auro-3D for a fee) is all about precision. Feature-lite, but it sounds phenomenal. HCC #244



Yamaha RX-A3040→£2,000 ★★★★★

This superb Atmos-ready flagship AVR features a fluid, dynamic sonic signature, slick operation and reassuringly robust design and build. Good in stereo mode, too. HCC #239



Primare SPA23→£3,500 ★★★★★

A stripped-down five-channel amp that majors on sublime, and power-packed, multichannel delivery. Limited functionality, but that's not what this luxury slab is all about. HCC #237



Pioneer VSX-930→£500 ★★★★

Operation could be smoother, but there's no doubting this bargain-priced 7.2-channel AVR (with Dolby Atmos) when it comes to precise multichannel delivery. HCC #249



Yamaha RX-V577→£500 ★★★★

Loaded with DSP modes (some fun, some not) and Wi-Fienabled for audio streaming, this clean-sounding Yamaha is a fab low-budget option. Bluetooth via optional dongle. HCC #237

TECH INFO: AV RECEIVERS



Tackling new heights: A recent innovation in AVR circles is the introduction of Dolby Atmos, the object-based sound format that has taken off in commercial cinemas and is supported in the home by the likes of Onkyo, Pioneer, Denon, Marantz and Yamaha, This requires new height speakers in addition to a regular 'flat' 5.1 or 7.1 speaker configuration. The heights can either be physically mounted in/on your ceiling, or provided via up-firing reflective models. Setup can be complex, but the results are certainly impressive. Atmos-encoded Blu-rays are a bit thin on the ground, but you can use Dolby Surround post-processing with regular 5.1/7.1 soundtracks to get the most from your new AVR/speakers. Rivals to Atmos are Auro-3D, which uses height speakers in a different configuration, and the forthcoming DTS:X. Most AVR brands have already pledged support for the latter.

How much power?: Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

TOP 5 BONUS FEATURES



Kingsman: The Secret Service Revealed

A lengthy (92-minute) doc that is a must-watch for fans of the kinetic British comic book adaption, this looks back at the movie's origins and delves deep into its production.



The Science of Interstellar

From black holes to the search for planets that can support life, this engrossing 50-minute doc (narrated by Matthew McConaughey) explores the scientific rationale that lies at the heart of the recent sci-fi epic.



Keepers of The Covenant: The Making of Exodus

Another great Making of... doc supporting a Ridley Scott flick, this 153-minute, seven-part feature covers everything you could possibly want to know about the film's production.





Episode Reconstructions

Only 20 of the 49 episodes of the BBC sci-fi series *Out of the Unknown* still exist in the archives. Thankfully, the BFI's DVD boxset uses surviving audio and stills to reconstruct several of these missing shows.





Evolution with Extinction

Clocking in at around two hours, this eight-part supplement looks at every aspect of the creation of Michael Bay's *Transformers: Age of Extinction*, from developing the story right up to the film's Hong Kong premiere.

Top 10 SUBWOOFERS

All prices are approx & may have changed



SVS SB-2000→£650 ★★★★

This follow up to the SB-1000, which incorporates a new 12in driver and revamped Sledge DSP amplifier, offers immense value for money. A mid-sized woofer that imbibes your Blu-rays with potent LFE, the SB-2000 sounds quick and taut, and is a perfect introduction to what a truly good sub can accomplish. HCC #233



REL 212SE→£2,750 ★★★★

Lush design joins engineering nous in this premium sub with two active 12in drivers supported by a pair of passive radiators. Loud, deep and impactful, your BDs are in safe hands. HCC #246



JL Audio Fathom F212→£5,900 ★★★★★

The US brand arrives in the UK in style – this 2 x 12in, 3,000W brute not only looks gorgeous, it's capable of a mindblowing performance. Got a big room? Get one of these! HCC #214



REL S-5→£1.600 ★★★★

A step up from REL's affordable T series, this 12in model is large and weighty, with a performance level to match. Fast and tight but capable of dropping very low indeed. HCC #234



Bowers & Wilkins PV1D→£1,200 ★★★★

One of the coolest-looking subs on the planet, B&W's PVID uses DSP trickery to craft an opulent low-end performance. The touch-sensitive OLED display is pure class. HCC #212



Eclipse TD520SW→£3,000 ★★★★★

This twin 8in woofer, driven by ICEpower amplification, aims for ultimate speed and tone – and succeeds. Simply put, the TD520SW is worth every penny of its asking price. HCC #249



BK Electronics P12-300SB-DF→£475 ★★★★★

Bass heads can get outrageous value for money in the shape of BK's overperforming 12in sub. A front-firing model is also offered, and other finishes knock the ticket down to sub-£400. HCC #247



JL Audio E-Sub e112→£2,050 ★★★★★

This 12in, 1,500W model from JL Audio's 'entry-level' line seems pricey, but its performance, design and tuning options make the investment oh-so worthwhile. HCC #240



REL Habitat 1→£1,300 ★★★★★

With its LongBow wireless system and wall-mountable design, REL's newest woofer is aimed at those seeking discreet bass. Twin 6.5in drivers work fast and with considerable grip. *HCC #231*



SVS PB-2000→£750 ★★★★

The ported sibling to the SB-2000, this woofer uses the same driver and amp arrangement, but in a far larger cabinet. Bass goes deeper, but not at the expense of finesse. HCC #243

TECH INFO



Why use more than one sub?: Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Flovd E Toole (his book Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

DEMO DELIGHT

tank drama is truly a thing to savour, with the audio engineers striving hard to deliver a packed, detailed soundfield that puts you right in the action. And, with its frequent artillery explosions, it's no surprise to find the LFE channel getting a thorough workout. Shells hit deliciously hard with taut bass throbs, while the eponymous tank's rumbles will scare your neighbours.

Top 5 CONSOLE GAMES



The Witcher III: Wild Hunt

RPG fans will lap this up.
Combining a brilliant (if grim)
narrative with great game
mechanics, sparkly HD visuals
and an exhaustive playing time,
...Wild Hunt makes Skyrim seem
like a distant memory.





Mortal Kombat X

The king of beat-'em ups, NetherRealm Studios' newest entry into the popular franchise is strewn with gore, plays well and even lets you fight as the Predator if you fork out for the DLC upgrade...



Alien Isolation

This fantastic 'survival-horror' captures the unsettling atmosphere of Ridley Scott's feature film with aplomb. The lighting effects and audio cues are suitably spooky, and the gameplay is nerve-shredding.



The Order 1886

Sony's puzzle-infused actioner may prove a little short in run-time for seasoned gamers, but it's graphically sensational – we love the use of the 'Scope ratio – and the multichannel audio is a treat.





Dragon Age: Inquisition

Finished with *Skyrim*? Then pick up this third instalment in the *Dragon Age* fantasy RPG series. A great-looking title, with plenty of side-quests littered around its vast open world to keep you adventuring for hours.



Top 10 ACCESSORIES



Now TV box →£10 ★★★★

An unqualified bargain, this Wi-Fi VOD streamer from Sky (and built upon Roku hardware) brings BBC iPlayer, Demand 5 and the Roku Channel Store to any HDMI-toting telly, plus subscription access to Sky Movies and Sky Sports. The quality of the adaptive bitrate streaming is impressive, and the £10 tag gets you P&P and an HDMI cable. HCC #226



Devolo dLAN 650 Triple+ starter pack→£120 ★★★★

This package makes Powerline networking fast (claimed at up to 600Mbps) and easy. The three-port Ethernet extender is sleekly designed, and provides a regular plug socket, too. HCC #239



Dune HD Base 3D→£250 ★★★★★

A media player for the AV enthusiast. Full-width and fully-featured, it provides support for 3D BD rips and much more, with a slick user interface and plenty of connectivity. HCC #235



Amazon Fire TV Stick→£35 ★★★★

Half the price of the standalone Amazon Fire box, this HDMI stick outguns its Chromecast and Roku rivals with more potent processing and a slicker UX. A brilliant add-on to any TV. HCC #248



QNAP HS-251→£300 ★★★★★

Adding HDMI connectivity to a NAS device is surprisingly useful – and this slim-line model from QNAP is styled to grace your living room. Flawless media playback and responsive. HCC #248



Sony SRS-X11→£60 ★★★★★

An affordable palm-sized Bluetooth speaker with internal rechargeable battery, Sony's SRS-X11 is supremely portable and sounds decent for the money. A neat little gizmo. HCC #249



Philips Hue→£180 ★★★★★

These Wi-Fi enabled lightbulbs might be expensive (this £180 starter pack includes two, plus the Wi-Fi bridge) but making your own multicoloured lighting scheme is a blast. HCC #220



HDAnywhere mHub→£1,000 ★★★★★

An impressively flexible multiroom solution that allows HD video and audio to be sent via Cat cable to four displays from multiple sources. Includes HDMI mirroring, too. Handy. HCC #240



Sony PlayStation 4→£350 ★★★★

The PS4 offers a killer gaming experience, with the under-the-hood power resulting in great-looking games. 3D Blu-ray playback has now been added via firmware. HCC #229



Philips SW750M→£130 ★★★★

A multiroom-ready speaker that works with the Spotify Connect service, this curved cabinet offers a decent, punchy sound for the price tag. No Bluetooth, DLNA or external hookup. HCC #246

TECH INFO: MEDIA PLAYERS

All prices are approx and



What about my TV?: Most flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Toshiba and Sharp) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

Storage: You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with



multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.

Top 5 BLU-RAY/DVD BOX SETS



Wolf Hall

The BBC's recent six-part historical drama features an A-list cast and lavish production values, while this BD boxset carries crisp 1080i visuals and an evocative DTS-HD MA stereo soundtrack.





The Wire: The Complete Series

The award-winning war-on-drugs drama hits Blu-ray reframed at 1.78:1 (it was originally broadcast at 1.33:1) and looking good. An 85-minute Q&A is among the extras.



The Long Good Friday + Mona Lisa

Two of Bob Hoskins' most iconic roles presented in an extraspacked boxset and given thoroughly impressive HD transfers – both look wonderfully filmic.



The Avengers: The Complete Series Five

For this 1967 24-episode run, agents Steed and Peel gallivant around in gaudy colour rather than black-and-white, and image quality on this seven-disc set is superb.



Twin Peaks: The Entire Mystery

Both seasons of the US cult TV series and the prequel flick ...Fire Walk With Me are given a fan-pleasing 10-disc BD release, sporting 7.1 DTS-HD audio and a treasure trove of bonus bits.



TOP 10 SOUNDBARS & SOUNDBASES

All prices are approx & may have changed



Canton DM75→£450 ★★★★★

Bigger and bolder than the already excellent DM50 (which retails for £100 less), Canton's sturdily-built soundbase speaker lacks HDMI inputs but makes up for it with Bluetooth streaming and a brilliant 2.1-channel performance packing weight, scale and detail. Simplistic, understated design. HCC #243



Monitor Audio ASB-2→£1,000 ★★★★★

This premium proposition marries Monitor Audio's C-CAM drivers with AirPlay and DLNA music streaming. Performance is exemplary – powerful and polished in equal measure. HCC #229



Yamaha YSP-2500 → £800 ****

An HDMI-switching 'sound projector' using Yamaha's Beam tech to craft impressive surround sonics from its drivers. Efficient sub, plenty of detailing and fun/useful app control. *HCC* #243



Twin 6.5in bass drivers lend the TV5's sound some decent low-end heft, but not to the detriment of the rest of the soundstage. An enjoyable, balanced listen. Easy to use. HCC #245



Q Acoustics Media 4→£400 ★★★★★

Å no-nonsense offering from the speaker specialist, which ignores HDMI inputs and daft DSP modes in favour of creating a nuanced, solid 2.1 soundscape. *HCC #238*



DALI Kubik One→£800 ★★★★★

The Danish speaker brand brings a slice of glamour to your setup with this stylish soundbar. No HDMI or digital decoding but it packs a tight, lively and nuanced sound. HCC #248



Philips Fidelio B5→£450 ★★★★★

Detachable battery-powered side speakers let you enjoy both genuine surround sound and straight 2.1 (there's a wireless sub). And each speaker offers Bluetooth hookup. Innovative. HCC #249



Arcam Solo Bar/Sub→£1,300 ★★★★

This pricey combi from audio specialists Arcam delivers a heavyweight, pristine 2.1-channel performance. Four-in, one-out HDMI (including 4K passthrough) is welcome. HCC #249



Yamaha SRT-1000→£450 ★★★★

A reasonably sleek soundbase with a thumping bass output, crisp highs, app control and Beam driver tech that strives hard to deliver a 5.1 experience. HCC #243



A striking design and bargain price tag will get Humax's debut 'bar plenty of admirers. Performance is decent for the money, albeit lacking low-frequency finesse. HCC #238

TECH INFO: TV PLATFORMS



TV addicts – go free, or pay-to-view?:

The landscape of the UK television industry has changed hugely in the last decade. The analogue switch-off has created a competitive market in free-to-air platforms, while Sky and Virgin Media are squaring up to the likes of EE TV, Amazon Prime and Netflix. Deciding which service is right for you can be complex, and you may find your needs are best catered for by a combination.

Sky+HD: The long-running satcaster offers a plethora of HD channels, with content including recent movie releases, live sports and sought-after US shows. Hardware options include the 2TB dual-tuner PVR.

Virgin Media TiVo: The cable giant offers a three-tuner PVR (1TB) with intelligent TiVo recording tricks, catch-up apps (including Netflix and Spotify), and over 240 channels (depending on package). Premium Sky content can be added on a monthly basis.

Freeview: The common option when it comes to TVs and set-top boxes. Freeview offers 13 HD channels (depending on regional roll-out) plus SD and radio. No contract fee.

Freesat: Satellite service offering a similar – but not identical – channel lineup to Freeview, delivered to your HD flatscreen via a dish but without a subs cost. As with Freeview, budget-priced STBs are available.

YouView: This relatively new kid on the block integrates the UK's main catchup portals directly into a backwards EPG. Again, channels are broadly similar to Freeview and there's no contract. Humax (PVRs) and Sony (TVs) are leading the hardware charge.

TOP 5 BACK-CATALOGUE BLU-RAYS



Charlie Chaplin: The Mutual Comedies

Exquisite restorations of the 12 shorts that the little master made for the Mutual Film Corporation in 1916/17. And this two-disc BD comes with some worthwhile bonus bits.



Blood and Black Lace

Mario Bava's genre-defining 1964 slasher makes its hi-def debut with a dazzling new 2K restoration that really gets the best out of the film's bold colour palette, alongside an exhaustive array of supplementary features.



Goodfellas: 25th Anniversary Edition

As far back as we can remember we always wanted a new 4K restoration of this Martin Scorsese gangster classic. And now we have one, with some new extra features, too.



The Wizard of Oz 3D

Delivering the best-looking version of the film to date (derived from a new 8K scan), this superb pack also squeezes in all the original extras and a 3D conversion that adds layers of fun to Dorothy's adventure.



The Day The Earth Caught Fire

The highlight of the BFI's 'Sci-Fi: Days of Wonder' festivities, this stunning Blu-ray restoration should introduce this underrated British disaster flick to the wider audience it deserves.









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Top 5 PVRs



Virgin Media TiVo, **£subscription**

This triple-tuner PVR offers ultimate recording flexibility, useful features – you can undelete deleted shows! - and awesome TiVo functionality. A no brainer if you're in a cable area





Sky+HD, £subscription

Sky's channel choice is second-to-none and its twin tuner 2TB PVR is a perfect partner. The recent EPG tweak is welcome and Anytime (the push VOD service) is brilliant for catching up on new movies



Panasonic DMR-HW220. £250

Panasonic's PVR mixes a 1TB hard drive with its Smart Viera functionality and media streaming – so at £250 it's an absolute steal, regardless of the uninspired design





Humax DTR-T2000, £180

This second-gen 500GB YouView PVR benefits from some under-the-hood tweaks that make the time-shifting experience slicker than ever. Useful app control, but no home media playback offered.





EE TV Smart Box £subscription

This quad-tuner 1TB PVR, from the mobile/broadband corp, offers innovative Replay 24-hour channel recording and great Smart device streaming. Needs more catch-up though



TOP 5 HEADPHONES



Sony MDR-HW700DS, £800

Comfy cans supplied with an HDMI surround processor, enabling multichannel audio to be fed to a virtual 9.1-channel soundstage. The effect is superb – great for late-night listening





Oppo PM-1, £1,100

Audiophile-grade, using planar magnetic driver designs, and with a lush design and build. The sound quality of the PM-1s is superb, so while these are undoubtedly costly, buyers won't be disappointed





Lindy Cromo NCX-100, £100

A cost-effective domestic option and great for travelling, these noise-cancelling 'phones (which can also be used as a normal passive design) feature a pleasant, balanced sound





PSB M4U1, £220

Aimed at both home and on-the-move use (and supplied with a carry case and two cable options), the M4U1s offer solid bass response and impactful highs. Build quality is good, as is comfort





AKG K550, £200

The styling of these closed-back cans is reassuringly 'classic' and the sound signature is surprisingly open and spacious. Use them for movie watching and you'll enjoy a good sense of scale and weight



TOP 5 SYSTEMS



Panasonic SC-BTT505, £600

Two-way driver arrangements in these grown-up looking speakers (plus a dizzying range of features) make this a great purchase. Big, dynamic sound, with strong dialogue





Samsung HT-J7750W, £800

Samsung's top-dog in its 2015 lineup is similarly styled and specc'd to last year's H series model. It has a powerful. dynamic sound, but is a little rough around the edges ****



Harman/Kardon BDS470, £650

Harman's 2.1 system eschews 'net TV and streaming features but majors in heavyweight build quality and solid AV performance. We tested a 2.1 iteration - 5.1 is also available



LG BH8220B, £650

With its silver finish, this is a suitable one-box system to partner with LG's flatscreen TVs, with a commendable, if slightly lacking in HF finesse, sound. Additional features including CD-ripping to USB. Handy



Panasonic SC-HTB570, £350

A commendable slim-line 2.1 system that can also be clicked together to make a soundbar. The punchy wireless subwoofer does a lot of the work. Bluetooth music streaming is onboard



HOME CINEM Choice

→In the next issue

Talking tech with Panasonic The AV giant reveals its plans for UHD Blu-ray, HDR and more Vrooom! The greatest movie car chases of all time The best in show Home cinema must-buys revealed in the EISA Awards 2015-2016

→ ON TEST

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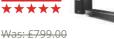


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AVAVENGER

Years ago **Steve May** fell in love with AIBO, Sony's electronic version of man's best friend. He now wonders where the company would be if it hadn't given up on its wackier side

WHEN WE LAUNCHED HCC some twenty years ago, the consumer electronics scene was a bubbling cauldron of innovation and excitement. And no brand epitomised that more than Sony. The Japanese giant, still cashing cheques written by the Walkman, was positively effervescent. Today, that fizz is flat. Sony is hiving off its AV division, just as it bunkered TV. At its core, all that's left is PlayStation, Sony Pictures Hackertainment and image sensors.

Personally I think the wheels fell off Sony's magic bus the day Sony President Howard Stringer pulled the plug (literally) on the company's robotics programme. Previously, Sony had created something quite extraordinary with AIBO, its autonomous pet. Was sending it to the pound a *Sliding Doors* moment?

'A new type of business'

AIBO was the idea of visionary Sony Corporate Senior VP Dr Toshitada Doi, and Tad Otsuki, head of the brand's Entertainment Robot Business Incubation Department (probably the coolest company division name ever). At the time, Doi declared: 'We hope we are building a bridge to a new type of business for Sony that has huge potential.' AIBO was beautifully designed by famed Japanese sci-fi artist Hajime Sorayama, better known for his paintings of sexy robots. Somewhere I have a signed piece of his early AIBO concept art.

I was lucky enough to spend time with an AIBO, and while I was probably anthropomorphizing, the way it chased pink balls and wilfully hid behind my couch was thoroughly charming. It was cheaper and cleaner to run than a real pet, too.

The AIBO project was binned ostensibly because of the cost involved, but its long-term loss I'll wager is far greater. The rapid development of sensors

(now a hot, profitable topic at Sony) and processing power could have given us something otherworldly. I suspect Stringer looked into the future and saw that what his company was producing owed more to the Graystones of Caprica than anything Sony founder Akio Morita might have wanted to shill.

A year or so after the robo pooch was put down, I revisited Sony in Tokyo. During a lunch in the staff canteen, my host produced a curious whirlygig and popped it on the table. It was Rolly, an MP3 player that spun and danced. I instinctively knew what was in front of me: a scrapyard Frankenstein's monster built from the moving parts of the AIBO project.

As the bizarre contraption spun around the table playing tunes (what was Sony thinking?) I could only look on in horror.

Sony briefly reprised its *Battlestar Galactica* ambitions with QRIO, a humanoid-style bipedal robot that was more company mascot than consumer product. It ended up on desk duties at the Sony showroom in Ginza, south Tokyo. More Captain Peacock than Cylon.

AIBO wasn't Sony's only moment of brilliant weirdness. During the early seventies, when Uri Geller was bending spoons and making headlines, the company reputedly ran a psy division to investigate the commercial potential of telekinesis and mind power. You can't help feeling that if it had continued with this agenda, we might now have a company more akin to TV show Fringe's Massive Dynamic, rather than the purveyor of flatscreens and smartphones we know today. And we'd all be buying androids, not Android TVs

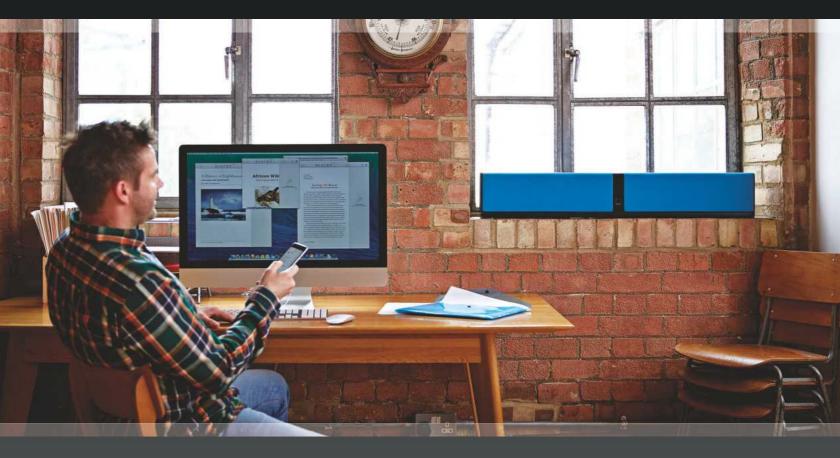
Ever had a robot dog? Or a robot vacuum cleaner? Or just a robot? Let us know: email letters@homecinemachoice.com Steve May lost his AIBO, so when Sony asked for it back he had to knock together a fake one using Technic LEGO, marzipan and





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